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LEMENTS OF ECONOMICS

BOOK I

INTRODUCTION

ELEMENTS OF ECONOMICS



CHAPTER I.

DEFINITION OF ECONOMICS.

1. It is usual to begin a new subject with its definition, clearing thereby its meaning and the subject-matter of its study. The definition of a subject is perhaps always difficult for a beginner to understand, specially of a subject like the one the elements of which we are going to study in this little volume. In fact the definition of Economics can be thoroughly grasped only when it has been studied comprehensively. But all the same it is of the first importance that we should begin our subject with its definition, for without some conception of it at the beginning we shall fail to do justice to certain discussions that will come in the course of our study.

Economics is a social science studying certain relations and activities of men in society. There are many social sciences studying different aspects of man's social relations and conduct separately.

Ethics, for example, studies the principles of right and wrong in human thought and action in society ; Jurisprudence studies the principles of legal relations between man and man ; and Politics deals with the principles of governmental organisation of society and the relations between the rulers and the ruled. Economics studies that part of man's activities in society which is concerned with his efforts for 'getting a living' or 'earning an income'. Of course, we cannot draw any boundary line between one kind of these social activities and another. Our ethical, legal, political and economic activities are so interwoven that social sciences cannot study them as absolutely independent of one another. But all the same, they can be sufficiently distinguished from one another and so it is possible for us to study the different kinds of our social activities separately. Economics confines itself to the study of the economic life of man in society, that is, all "*those social phenomena that are due to the wealth-getting and wealth-using activities of man.*" It therefore studies how man in society produces wealth, how he shares it if he has produced it in co-operation with others and how he consumes it.

^{to}
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^{the} The subject-matter of Economics however, will not be clear unless certain limitations be known. As it is a social science it excludes from its study the economic activities of a man living away from

society like a Robinson Crusoe, or an Indian 'Yogi' ; nor does it study any 'abstract' or abnormal man, but it studies *real* man, man as he ordinarily moves and acts in the "*business part of his life*." Moreover, as Economics studies only those activities of man which arise out of his efforts for earning an income, it excludes from its scope all those efforts which are labour of mere pleasure, or of love, like the games played by an amateur sportsman, the honorary services, and the domestic duties done by the members of a family to one another, for there is involved no motive for earning any income at all. Lastly, Economics studies the economic life of the nation as a unit, and incidentally, as in modern times, of the world as well, although the domestic economy of the family and the municipal economy of the city, are studied as only subordinate to the larger economy of the nation or society as a whole.)

2. (The earlier writers on Economics defined it as "The Science of Wealth." Rightly interpreted the definition is not inaccurate, for Economics—wealth can be studied only in the Science of relation to man but never by itself. Wealth.

But their ill-treatment of the subject led the economic science to be misunderstood and condemned as a "gospel of mammon", teaching man to pursue wealth as an end in itself and to enrich himself at any cost. - Economics no doubt

studies wealth, but only as subordinate to man. It really studies man, his wants, his efforts to obtain things for fulfilling those wants, and his dealings with others in society whose help and co-operation he needs for this purpose. As Marshall rightly says, Economics "is, on the one side a study of wealth, and on the other, and more important side, a part of the study of man." It studies how he gets his income, how he uses it and how he alone, or in co-operation with others, can make the best use of the natural resources with a view to enriching himself and the nation materially. Much of man's physical, mental and moral qualities is moulded by his material wealth, and by the way in which he acquires and uses it. Material welfare, which is based upon wealth, is therefore a very important factor in determining the quality of man's life. It is the life of man through his multifarious activities in connection with material wealth, that is studied in Economics. Much mis-understanding then could have been avoided if the science were defined as the study of man's activities in relation to wealth.)

REFERENCES :—

- Ely and Wicker—Elementary Principles of Economics,
Bk. I, Chap. I.
Penson—The Economics of Every Day Life, Vol. I,
pp. 1—3.
Marshall—Economics of Industry, pp. 1—3.

CHAPTER II.

SOME FUNDAMENTAL CONCEPTS.

1. We have learnt in the preceding chapter that Economics is concerned with the business part of man's life, that is, that part of man's life which is mainly concerned with the acquisition and use of wealth. This definition gives rise to two questions in our mind. One is, Why do men work for the acquisition of wealth, What is wealth desired for ? and the other question is, What is wealth ? We shall now attempt to answer these questions.

The first of these is in fact a question about the motives and impulses that lead to man's efforts for acquiring wealth. Man is an animal, The motives in economic activity. but he is also something more—he is a spirit. As an animal he has certain wants which he must fulfil if he is to maintain his animal existence, and as a spirit he has certain thoughts, ideals and activities that enrich his spiritual existence. The motives that lie behind all the economic activities in society arise out of the wants and desires that man feels as a spiritual animal. Firstly, for example, man desires wealth in order to satisfy his purely personal wants like food, clothing, house rooms, furniture,

etc. But man is not an isolated creature with all his thoughts centred in himself. He is a social animal living among, and for, his friends, relatives and neighbours, and the desire to remove their difficulties and wants also impels him to acquire wealth. Thirdly again, there is a love of power, of honour and admiration in most men and the fulfilment of this often depends on the wealth that man possesses and acquires. Lastly, but not the least in importance in a civilized community, there is the love of activity for its own sake. Our love of sport and of innumerable hobbies like amateur gardening, photography, literature etc., bring us no direct economic gain but are responsible for the economic activities of others through whose help we get our desires satisfied. The various sports are responsible for the development of many industries for supplying our athletic goods; our love for gardening has led to the economic activities of others who supply us with the necessary implements. In these cases it is not the wants that directly give rise to activities but the activities that arouse the wants which in their turn lead to the economic activities of others. In fact in the lower stage of civilization it is the direct wants that lead to activities. but the more the progress of culture the more is the love of activities for their own sake.

It must not be supposed however that man follows these motives always consciously. Sometimes they work unconsciously in him and he follows them out of mere habit or instinct.

2. Before we take up the second question, we shall do well to have very clear idea about the meanings of two terms, viz. Utility and Goods. (*Anything that is capable of satisfying a human want is a good or utility*) Utility

Utility may however refer to the good itself or the power that it possesses of satisfying a human want. When, for example, we say that 'wheat is a great utility' we mean that wheat is a thing capable of satisfying a great human want; again, when we say that 'wheat has a great utility' we mean that wheat has the power of satisfying a great human want.

But utility in the economic sense should not be confounded with *benefit*. The economic and the ethical senses of the term do not always go together. Utility in ethics means the power of rendering a benefit but in economics it means the power of satisfying a human want. Thus intoxicating liquors and drugs are not regarded as utilities by the moral philosopher but to the economist they are as useful as our bread and books, for they are all satisfying some wants felt in society. Economic wants may be beneficial, "frivolous" or

indifferent and even positively harmful to the consumers but the objects which satisfy those wants are all regarded as utilities by the economist.

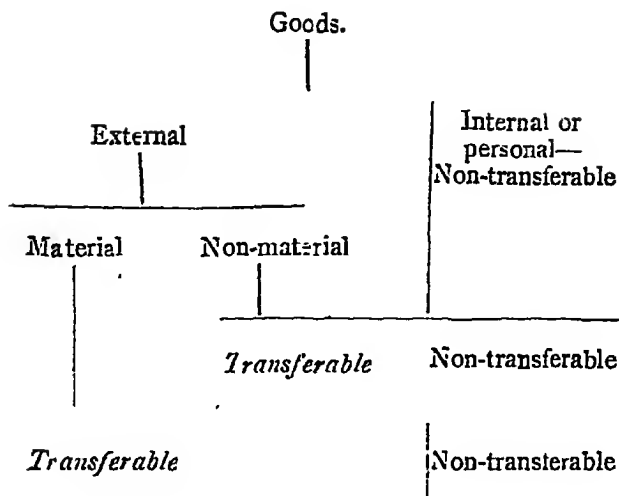
(A commodity may possess *five kinds of utilities*.² Firstly, there is the *elementary* utility, referring to the component elements by virtue of which a commodity is capable of satisfying a want. For example, wood is so constituted that under some circumstances it is capable of serving us as a table. But the wood as we find it in the forest is not able to satisfy our want. It must be cut into pieces and turned into a convenient shape so that we may use it as a table. This utility that it possesses by virtue of its form is its *form* utility. But even when it has been given a convenient form it can not serve our purpose unless and until it is carried to the place where it is to be used. The persons who are carrying goods from places, where they are of no use, or of little use, to places where they are of use, or of greater use, are said to be creating the *place* utility of such goods. Again the commodities may be brought to the particular place but they must be kept stocked or preserved until the time when they are needed. This is their *time* utility by virtue of which they become useful or more useful at a particular time, as woollen goods are in winter, and ice is in summer. Similarly the cabinet-makers who are carrying the various kinds

of table to their shops and keeping them stocked for the consumer's use are creating both place and time utility of the tables. Lastly, the table cannot satisfy an intending consumer until it comes into his possession. This utility which is created by exchange or otherwise is called the possession-utility of the commodity.

Thus these are the five kinds of utility that any commodity can, and does, possess. Goods about to be consumed possess all the utilities at the same time, though any one of them may be specially important according to circumstances, as the time utility of woollens is in the winter season in India)⁴

3. Now (anything that is useful in the sense that it satisfies some want of man is a *good*.) Goods may include both material things and

Goods—Free and Economic, personal services. It is however not enough that a thing should have the capacity to satisfy a human want but man must discover that it possesses that capacity. What is therefore regarded as an obnoxious thing may turn into a good when its useful properties are discovered and utilised. Goods are of different kinds and may be thus classified :—



Goods are either external to man or internal in him. The external goods may be either material or non-material, both of which again may be transferable or non-transferable. Transferability means that the ownership can be transferred from one person to another and so it implies that the good is capable of being possessed and appropriated. Transferability however does not necessarily involve transportability. Land cannot be transported but a man can transfer his title to it to another person. All internal goods, such as, a man's skill, health, education, knowledge, faculties and habits, etc.,

are inseparable from his person and as such non-transferable. The external material goods, like land, buildings, furniture, bread, books, etc., are transferable, and those like climate, rivers and streams, etc., are non-transferable. Among the external non-material goods, those, like the good will of a man's business, are transferable, whereas others, like personal fame, friendship, professional reputation, and business connections as far as they depend on personal trust, are non-transferable.

Transferability here means not the physical capacity of being transferred but exchangeability for something of value. It therefore involves both utility and limitation of supply, because no one cares to pay for anything if it is not useful to him, nor will he care to buy it if it be a *free good* which he can have in any quantity for the mere wish or without any effort. It is the transferable goods only which are regarded as *economic goods*, and the reason is obvious : the goods that are free, and those that are limited in supply but not transferable, are not taken account of in business life, and as economics is concerned with the business part of our life, the transferable goods only are regarded as economic goods. Economic goods therefore are those which are useful, limited in quantity and transferable. Economists ordinarily identify 'wealth' with economic goods. We shall however

study the attributes and meaning of wealth in detail in the following section.

4. The term 'wealth' has been derived from the noun 'weal' (weal+th) and means the state of welfare. Anything then that adds

Wealth: to the welfare of man is wealth.

This is however the etymological meaning of the term. Economists generally use it in a narrow sense. In fact they are not at one in defining it and so the term is often a puzzle having been used sometimes in a narrow sense and sometimes in a broad sense.

Ordinarily, those goods only, which are limited in supply and transferable, are regarded as 'wealth'. As such wealth must have three attributes, viz. *utility, limitation of supply and transferability or exchangeability*. Thus air and water, though extremely useful, are not regarded as wealth under ordinary circumstances, because one can have them in sufficient quantity for the mere wish. But they may become wealth where their supply is limited and requires human exertion, and commands exchange value as well, as air in the depth of a mine and water in the desert. Again, a man's skill in any art, though useful and limited in supply, is not regarded as wealth because it cannot be transferred for a price. For the same reason a man's physical strength, health, faculties for appreciating

music and literature, personal reputation, affections of friends, etc. are excluded from the category of wealth. They may be sources of wealth and enable their possessor to acquire wealth and happiness, but are not themselves regarded as wealth, because being non-transferable, they do not come in into the business part of our life. The good will of a man's business however is rightly regarded as wealth because it is useful, limited in supply and exchangeable as well.

According to Prof. Taussig, wealth consists of those things which are useful and limited in quantity. He does not evidently regard exchangeability as a necessary attribute of wealth and would therefore bring in all those goods referred to in the previous paragraph under the category of wealth.

There are other economists, specially the German School, who go even further, and say that anything that is useful is wealth. They therefore identify wealth with goods and would therefore regard even good climate, rivers, lakes, trade connections or reputation, even good laws and customs, as part of the wealth of a nation.

We cannot really dogmatically adhere to any of these definitions of wealth and reject the others as incorrect, but the acceptance of any of them will depend upon the object in view, and the denotation of the term should be understood from

the context. In the daily business of life, it is true that when we talk of wealth, it has reference to the exchangeable goods only. But we cannot always stick to this narrow meaning. Ordinarily for example, we do not regard the legal skill of a man as wealth because it is not transferable, but when we wish to compare his wealth with that of his brother, who has inherited equal patrimony but possesses no skill for anything, nor is endowed with any good faculty to take advantage of life's opportunities, we feel disposed indeed to regard the lawyer brother as more wealthy. For such comparative purposes we cannot but include the personal properties and qualities under wealth, though in such cases it will be proper to qualify the term with the adjective 'personal.' Again when we take an account of the wealth of a nation we should bring under it all its lakes, rivers, and streams that add to its material resources, as well as the collective wealth of the community like harbours, art-galleries, museums, state forests, railways and irrigational systems, etc. If again our object is to compare the wealth of one nation with that of another, we fail to have a correct idea of their comparative welfare unless we take into account the climatic excellences, the health and vigour of the people, trade connections and business reputation, good laws and government, etc., of the two nations.

Strict adherence to any of the definitions therefore will make the meaning of wealth unprofitably arbitrary. But then in order to guard against misunderstanding the term wealth should be qualified by adjectives like 'personal', 'collective', 'national', etc., as necessary, so that the author's point of view may be clear to the reader.

But ordinarily, and unless qualified by any adjective, wealth simply should *always* mean those goods which are limited in supply and exchangeable. We may squeeze the definition still further and say that ordinarily anything which is exchangeable is wealth, since exchangeability itself involves utility and limitation in quantity. All wealth therefore must be goods, but all goods are not wealth; only exchangeable goods are wealth.

5. Owing to the various points of view from which wealth may be considered
 Classification of wealth Marshall gives the following classification :—

1. Individual and Personal.
2. Individual and Collective.
3. National and Cosmopolitan.

The Individual Wealth of a man consists of (a) all material exchangeable goods belonging to him e.g. land, buildings, furniture, money, etc., (b) all those non-material goods which are, however, external to him and transferable, e.g. the good will of his

business, if he has any at all. Internal goods, like good health and skill at any art, are thus excluded. Lastly, in calculating his individual wealth, we must be careful to add all material debts that others owe to him and deduct all such claims that they might have against him. In estimating the wealth of a man it may *sometimes* be regarded as necessary to take into account certain non-material goods which are internal to him and so inseparable from his person and non-transferable, e. g. his skill in any profession, his physical strength, good health, etc. by virtue of which he is able to add to his individual wealth. But in such cases, it is better to regard them as his *personal* wealth. Collective Wealth in a community refers to all those goods which are owned collectively and enjoyed in common, e.g. public parks and gardens, public libraries museums etc.

The National Wealth of a nation consists of (a) all the individual wealth of each person (b) as well as the collective wealth of the community. Some economists would also add to these all those free gifts of nature which are limited in supply, e.g. the rivers, lakes, climatic excellences, etc. The German School would even go so far as to add all non-material wealth of the nation, like its national vigour and efficiency, good business relations, etc. We should however deduct all that the nation owes

to foreigners and add whatever the latter owe to the citizens of the former. The debts and claims within the nation offset one another and should therefore be ignored. The Cosmopolitan Wealth is the wealth of the world. It consists of the national wealth of all nations as well as the free unowned goods like the oceans and seas, international waterways, etc. The debts and claims between nations must, of course, be left out of account.

6. Having a definite conception of the meaning of 'wealth' we shall now study the activities that arise in society out of man's effort for acquiring and using it. For convenience of study we shall classify our economic activities and study them under some scientifically arranged divisions. Economics, as we have learnt, studies "the wealth-getting and wealth-using activities of man." The first thing that man does with wealth is that he uses it for satisfying his wants, that is to say, he consumes it. *Consumption* therefore is one division of our science. But there is no question of consuming a wealth until it has been produced. *Production* then is another branch of our subject. But in modern society a man scarcely produces by himself all the goods that he needs for his use. Each man generally specialises in particular lines of

production; produces one or a few goods and then exchanges them for others that he needs himself with other persons in the community. *Exchange* of goods and services is therefore the third division of our science. Again, in modern society wealth is produced in most cases by the joint efforts of men, each contributing his services in one form or another and also directly or indirectly. Wealth thus produced can never be said to belong to any one of them, but all are entitled to a share out of it, and the process in which they receive their shares may be called *Distribution* of wealth. This is thus the fourth division of economics.

Further, it should be noted that the government of a country exerts a great influence upon the economic life of her people. For example, it helps production by suitable commercial and industrial legislation, in some cases it also controls the industries, and in others again it takes upon itself both the ownership and the management of industries. What industries should be simply regulated and controlled, what should be owned and managed by the state, and also, what laws are required for the commercial and industrial progress of the country are studied separately, and this branch of our science is known as *Public Economics*. Lastly, government's policy of taxation and revenue expenditure also vitally affects the consumption, production and

distribution of wealth in the community, and the economic aspect of this branch of governmental activity well merits a separate study, and this branch is called *Public Finance*. Thus Consumption, Production, Exchange and Distribution are the main divisions of our science with Public Economics and Public Finance as its subsidiary parts. In this elementary treatise we shall study only the four main divisions of the science.

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Ely and Wicker—Elementary Principles of Economics,
Chapter I and X.

Penson—The Economics of Every day Life, Bk. I—Chap. I.

Marshall—Economics of Industry, Bk. I—Chap. I, Bk. II—
Chap. II.

EL M NT OF CONO C

OO II

CONSU PTION

CHAPTER I

INTRODUCTORY

I. Consumption is concerned with the study of human wants and their nature, the laws that regulate man's demand for goods and also those that enable man to derive the greatest satisfaction from the use of his wealth. We shall do well to have first a clear conception of the meanings of certain terms that will occur in our immediate discussions, e. g. Want, Desire and Demand, Value and Price.

A *want* means a thing a man is, or feels that he is, in need of. *Desire* means the willingness to have a certain thing a man feels the want of. A man might have, or might feel that he has, the want of a certain commodity but all the same he might not desire to have it. There are people in society who are always suppressing their desires for things; a want therefore will not necessarily develop into a desire. Again, a mere desire for a thing will not constitute his demand for it; *demand* means *effective desire*, i. e. desire coupled with the ability to pay, and the willingness to pay, for it. A beggar peeping in through the window of a jeweller is taken for a thief and is driven out, for the jeweller thinks that however desirous

the beggar may be for a gold ring, he has not the ability to pay the price for it and so he cannot demand it. Even if a man has the capacity to pay the price, he cannot be said to demand anything unless he is willing to buy it.

(The term *Value* is used in two senses—value in use and value in exchange. When we say air and light are of great value to man we mean they are very useful to man; Value and Price again, when it is said that the value of a shirt is 10 seers of wheat, it means that a shirt can be had in exchange for that quantity of wheat. When, however, the exchange value is expressed in terms of money it is called *price*.)

2. Consumption in economics means the use of goods in the satisfaction of human wants. Man cannot create matter, nor can he destroy it. He creates only utilities out of the matter supplied to him by nature and when he consumes anything he simply destroys its utility by use.

In some cases the utility of things is destroyed by a single use, and in some cases the destruction of utility comes through several uses or process of use. The utility of a glass of milk, or of orange, is destroyed at once by a single use; but the utilities of our clothings, shoes, etc. are destroyed through several uses. There are other things again, the utili-

ties of which continue for a very long time and man's hand in their destruction is not so prominent as that of *nature* or *time* e. g. buildings, furniture, pictures, etc.

3. Consumption has two aspects. There is no doubt that in our civilized community a considerable part of our economic activities arises from our desire for activity for its own sake ; but all the same a very large part of our productive efforts arises out of our direct wants which may thus be regarded as the motive force behind production. Man therefore produces in order to consume, but it should also be noted that man consumes not only to maintain his existence but also to enable himself to store up, recoup and increase his energy so that he may plunge into further production. Just as larger production of wealth enables man to consume more, so larger consumption of goods of the right sort and in right quantity enables him to produce more. Consumption is therefore both the *end* and the *means* of production—man produces in order to consume and consumes in order to produce.

REFERENCES :—

Marshall—Economics of Industry, p. 42.

Ely and Wicker—Elementary Economics, p. 113.

CHAPTER II.

HUMAN WANTS

1. (The goods that satisfy our wants are of different character. There are some goods which are indispensably required for maintaining our existence, e.g. rice, wheat, etc. In a civilized community clothing and house-rooms also are regarded as indispensable. Classes of goods These goods which we cannot do without may be regarded as the *absolute necessities* of life. A small quantity of ordinary food, and a little quantity of clothing, might enable a man to live, but to preserve and increase his efficiency, or productive capacity, he must have better food and clothing, which may therefore be regarded as *necessaries of efficiency*. There are retain other goods which, though not necessary for maintaining existence or increasing efficiency, are yet regarded as necessities, because people have formed the habit of using them, or because custom or convention requires them to use such goods. They are called *conventional necessities*. Tobacco, for example, is a conventional necessary to a smoker, so is wine to a drunkard. The peculiarity and importance of conventional necessities lie in the fact that the consumer insists upon having them and tries to provide for them

even at the cost of absolute necessities and the necessities of efficiency.)

(Apart from these, there are two other classes of goods that enter into human consumption, viz. comforts and luxuries. It is difficult to distinguish between the two; yet the best way to draw the distinction is to say that the comforts refer to those goods by using which the consumer enjoys a sense of ease and thereby feels a little more zest for work. They add to his efficiency to some extent but yet he gains less than the price he has to pay for them. Luxuries are simply superfluous consumption, either adding nothing to the efficiency of the consumer or detracting from it. They are harmless as when they do not decrease efficiency, and harmful as when they do so. A certain blame is always implied in luxury. When we say that a man is luxurious, we mean that he is not making a proper use of his income. There is no such idea of blame in comforts which are regarded as more or less justifiable.)

(We cannot, however, put a mark on things and say this is a comfort, that is a luxury, and the other is a necessary. It all depends on time, and on the means and social position of the consumer. Tea, for example, is a necessary to an English peasant but a luxury to an Indian cultivator; so is the case with shirts. Again, tobacco, which was a luxury to the English

peasants in Elizabeth's time, has now become a necessary to them. A motor car is a mere comfort to a rich landlord, but is a great luxury to his poor tenants.)

2. We have known the various classes of goods that we consume to satisfy our wants. Let us now study the characteristics of those wants. (The first thing that will at once strike us is that our wants in general are unlimited; but all the same any particular want is limited, because it is satiable. The satisfaction derived from any commodity goes on decreasing with every increase of the units consumed. Moreover, our wants are not equally urgent, some being felt more keenly than others. Another feature that characterises them is that they are competitive. Firstly, there are certain things all of which are capable of satisfying the same want, e.g. tea, cocoa and coffee for drink; gas, electricity, kerosene oil and candle sticks for light; beef, mutton, chicken, etc. for meat, and so on. Secondly again, as our wants vary in intensity we compare them in order to decide which should be satisfied first and which next. In this way all our wants compete with one another. But they are complementary as well, that is, one want creates another. The demand for a motor car creates the

demand for petrol, that of a table creates the demand for wood, nails, screws, polish, table cloth, chair, etc.

It is also interesting to note that our wants are often determined by our social standard. A Punjabi uses a turban as his head-dress, not because he cannot use a cap or a hat, but because his society has set the turban as the standard of his head-dress. Further, some of our wants are imposed upon us by the customs of society and by the profession or rank to which we belong. In these cases we submit to social rules and etiquette, and our personal likes and dislikes are of but little account. Our wants are also adapted to our environments. When a Bengalee is in Bengal he takes rice, and needs but a small quantity of clothing; but when he goes to the Punjab he takes wheat, which is a more suitable diet for that climate, and he has to use more clothing as well. A head-dress is a necessity in the dry heat and cold of the Punjab but it is a superfluity in the warm and damp climate of engal. Lastly, it should be noted that our wants increase or decrease, both in variety and quantity, with the increase or decrease of our resources, knowledge and culture, a point that will at once go home when we compare the wants of a primitive people with those of a rich,

civilized community. The wants of an individual also are similarly subject to this rule.)

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Chapman—*Outlines of Political Economy*, pp. 51—61.

Moreland—*Introduction to Economics*, pp. 139—155.

Seager—*Principles of Economics*, Chap. V.

Marshall—*Economics of Industry*, pp. 42—44.

CHAPTER III

LAWS OF CONSUMPTION

1. (Man always tries to derive the greatest amount of satisfaction from his consumption of wealth. In doing so he finds that his consumption is subject to a natural law that is not always wel-come to him. As he goes on consuming more and more units of a commodity, the utility of the successive units, however, goes on decreasing. This is known as the *Law of Diminishing Utility*. After the utility of the last unit of the commodity sinks to a certain point, the consumer feels less eager for more of it, and feels more keenly the desire for some other commodity, from which he expects to derive a greater amount of satisfaction. His demand is naturally shifted from the former to the latter and this process of shifting the demand may be called the *Law of Substitution*. The law of diminishing utility also leads man to follow the *Law of Variety* in his consumption. The principle of variety enables him to check the rapid fall of satisfaction and counteracts to some extent the action of the law of diminishing utility.) If a

man, for example, consumes only rice and pulse in his breakfast, he will not be able to take more than a few morsels because of the law of diminishing utility. But the effects of this law will be felt less quickly if he takes some pulse, some vegetables and a little fish or meat along with rice. He follows thereby the principles of substitution and variety at the same time and increases manifold the satisfaction that he derives from his meal. The law of diminishing utility explains our innate love for variety and the complex desires and wants of man in a civilized community. Our satisfaction from consumption also depends largely on the Principle of *Harmony* or *Consistency*. This is the first requisite in music, painting, architecture, dress, food, etc., and a violation of this principle robs our consumption of much of its pleasing effect. The fashions, patterns and designs of the goods that capture people's fancy explain the fact of their being pleased at the consistency of colour and form in things. A homely example from the dining room will show how greatly does the satisfaction from our meals depend on consistency of things. We never take meat and milk successively—if we do, we only invite troubles. Our dishes at the table become uneatable if they contain too much of salt and too little of other spices. It should be

noted that man does not always follow the laws of substitution, variety and harmony consciously ; nor does he always follow them. But whenever they are ignored, willingly or otherwise, the consumer fails to derive as much pleasure as he otherwise could do.

(The law of diminishing utility is one of the most fundamental laws affecting every branch of our economic activities, and it is by far the most important law affecting our consumption.) We shall therefore study it more intensively in the next section and see what consequences have followed from it.

2. (The law of diminishing utility may be thus stated :—Other things remaining the same, the more

we have of a thing the less we

The law of
diminishing
utility

want still more of it ; that is, with
every increase of the stock of a

Satiable Wants. commodity the additional utility

that we derive from an additional unit of it decreases. If we have more and more of it the utility of

the last unit may drop down to zero and ultimately even to a negative point.) The following illustration

will make the idea clear :—(Suppose a man is consuming mangoes, all of which are of uniform quality.)

The first of them yields him a satisfaction of, say, 5 units, the second 4, the third 3, the fourth 2, the fifth 1 and the sixth *nil*. On consuming the

seventh mango he feels slightly indisposed which is as good as saying that he derives from it a dis-utility or negative utility of, say, 1.) (For a diagrammatic representation the reader is referred to Fig. 1 in the Appendix.)

(The law is, however, subject to certain limitations. In the first place, the consumption must be fairly continuous,) for if a considerable time is allowed to lapse between the consumption of the first unit and that of the second, the utility derived from the latter may be as great as, if not greater than, that yielded by the former unit. Secondly, the qualifying phrase, 'Other things remaining the same', is very important, for the law relates to the consumer as he is at any given time with his present habits, tastes and means.) If these undergo a change the law will not apply. A man, for example, may consume more of a commodity with equal or greater satisfaction when his habit, or taste for it, becomes more strongly developed as in the case of tea, good or bad books, etc. and also when his income suddenly rises. Of course, the law of diminishing utility will assert itself after the new change in the habit, taste or means of the consumer reaches a stable position.)

(There are again some cases where the utility of the extra doses may go on rising at first only to fall after reaching a certain point.) Professor Chapman

gives a number of such interesting cases*, (for example, the collection of old coins by a research scholar, the collection of a rare thing when the value of the collection increases with the increase of the units acquired.) To quote his own example again. "To have two great auk's eggs is to be envied, but to have six is to be a prince among egg collectors." (Similar is the case with the initial doses of things, like coal, which can be put to profitable use only when sufficient quantity has been first acquired.) (In such cases the *utility curve* will be as indicated in Fig. 2 given in the Appendix.)

(*Wine and money* are sometimes cited as exceptions to this law. But they are, really not so. A drunkard's demand for more and more glasses of wine does not appear indeed to suffer a fall. But there does come a time when all sense is lost and all demand stopped. Even before this final stage is reached the man demands more and more wine only under the influence of intoxication that robs him of all his wits. Of course, with such a person our laws of economics have but little to do.)

(The case of money too is interesting. Money is not consumed directly like ordinary commodities and so it is of a different nature. It is the medium

of obtaining things that we require for the satisfaction of our wants. But as our wants in general are unlimited, so the desire for money too is unlimited. Money is therefore cited as an exception to the law of diminishing utility. It is further sought to be proved by the fact that the desire of a miser to acquire more and more money never diminishes in intensity with the increase of his accumulation. It should be noted, however, that the hoarding habit develops into an abnormal degree in a miser, and being an abnormal trait of human nature, it does not come within the range of economic laws. That money is really not an exception to the law of diminishing utility will be evident from the fact that a man who becomes a multimillionaire is not as anxious for more acquisition of money as he was when he was poor, and we also know that the utility of a rupee to a man goes on falling as his income increases, and it rises as his income falls. The only difference between money and other goods is that its utility falls very very slowly and imperceptibly and never drops down to zero.)

(Honour, fame, knowledge, etc. do not ordinarily come under the category of wealth and so we may ignore them. Thus it will not be very inaccurate to say that the law of diminishing utility is practically universal in its application.)

3. (From the conception of diminishing utility

we are naturally led to the conceptions of total utility and marginal utility.) We Total and marginal utility have already seen how (under the influence of the law of diminishing utility, the satisfaction derived from the successive units of a commodity goes on diminishing, although the total satisfaction does in fact increase.) We have also seen that (the law operates not only in the case of consumption but also in that of acquisition. The total satisfaction derived from all the units of the stock is its *total utility*, but the utility added by the last unit of the commodity to the utility of all the other units is its *marginal utility*.) In other words, the marginal utility of a commodity is the total utility of all the units minus the utility of all the units but the last. (Where, however, only one unit is consumed or acquired, the total utility and the marginal utility are the same) The illustration given in the previous section will help us to understand the point. ^{As before} (There are only 5 mangoes, all uniform in quality, and the satisfaction derived by the consumer from the successive units are 5, 4, 3, 2 and 1. Their total utility is therefore 15, but the marginal utility is $15 - 14 = 1$. The following table indicates the total and the marginal utility at each step of his consumption or acquisition :—

Units	Total utility	Marginal utility
1 st	5	5
2 nd	9	4
3 rd	12	3
4 th	14	2
5 th	15	<u>1</u>

Now it should be noted that all the mangoes are uniform in quality and yet the satisfaction from the successive units goes on falling, till the fifth one yields the consumer only one unit. It is as good as any of the rest and yet it yields the least amount of satisfaction simply because of the accidental circumstance that it comes last in the order of consumption. Any other unit consumed last would have yielded only *one* unit of satisfaction, for all the its are alike. The ascertainment of marginal utility becomes easy enough when the units are consumed or acquired one by one; we can, however, find it out, even when all the five mangoes are considered a stock, by removing any one of them and seeing what amount of satisfaction is lost

thereby. Marginal utility may therefore be best defined as the *utility that will be lost if any one unit of a commodity be lost or removed from the total stock of it.*)

4. (The conception of marginal utility is of very vital importance in our subject,) and no student of economics should proceed a step further without thoroughly grasping its meaning. Its importance will be apparent when we know what it is that measures the economic value of things in human society. It goes without saying that the economic importance of a commodity or service depends upon the utility that it yields. But the question is whether it is the total utility or the marginal utility of it that measures its economic value or price.

Marginal
utility and
price

At the out-set, it may be noted that goods are never valued by the whole stock but by their units. For example, when we say that iron is cheaper than gold we do not mean that the whole quantity of iron is cheaper than the whole quantity of gold, but that an ounce of iron is cheaper than an ounce of gold. The cause of its comparative cheapness lies in the fact that because of its larger supply in proportion to the demand, the utility of an ounce of iron is less than that of an ounce of gold; that is, its marginal utility is less than that of gold.

For the same reason, air, and water, inspite of their infinite utility, have ordinarily no economic value at all, because owing to their excessive supply their marginal utility is *nil*, and we lose nothing by the removal from earth of a gallon of air or water. It is therefore (the marginal utility that determines the economic value of things.)

To be more definite, we may take one mathematical example. (The example of mangoes given in the preceding section may again serve our purpose. Assume that all the five mangoes, supposed to be uniform in quality, are exposed for sale, and the seller wants to dispose of them all. What will be the price in that case that the buyer can be induced to pay for each of the mangoes? If one unit of satisfaction is worth a pice, the first mango is worth 5 pice, the second 4, the third 3, the fourth 2 and the fifth mango is worth 1 pice. Totally, they yield 15 units of utility worth 15 pice; and valued on the basis of the total utility of the stock, each mango should sell for 3 pice; but really it will, under the conditions supposed, sell for one pice only.) The reason is this. Although considered separately the mangoes differ in utility yet considered as a stock, each has the same economic value as any of the rest, because they are all uniform in quality. If any of them be

removed it is one pice worth of satisfaction that will be lost. As no one will pay more for a thing than the satisfaction he derives from it so each of the mangoes will sell for the satisfaction that it yields the consumer, i.e. for one pice only. If however the price be fixed at 2 pice each, the consumer will buy 4 mangoes only, for why should he buy the fifth one as well for 2 pice, when it will yield him one unit of satisfaction worth only 1 pice? At 2 pice per unit therefore only four mangoes will sell, and it should be noted that the marginal utility of the 4 mangoes is also worth 2 pice. Thus the economic importance of a commodity is always measured by its maginal utility, not necessarily to an individual buyer, but to the market as a whole. As Ely and Wicker would say, "It is the utility of a *given quantity*, of a *unit*, of "*a little more or a little less*," of a commodity that we consider when comparing and measuring the economic importance of goods".*

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Seagar—Principles of Economics, Chap. V

Marshall—Economics of Industry, Bk. III, Chap. III

Chapman—Outlines of Political Economy, Chap. IV

Thomas—Elements of Economics, Chap. 4.

*Elementary Principles of Economics, p. 124.

CHAPTER IV

CONSUMER'S SURPLUS

1. We have thus seen that (the price of a commodity measures only its marginal utility to the market and is therefore no
Consumer's Surplus indication of the total satisfaction derived from it by a consumer.)

Let us assume, for example, that sugar can be had in the market at 6 annas a seer, and

a consumer is *willing to pay*

Rs. 2	for the 1st seer
R1. 4as.	" " 2nd "
R1.	" " 3rd "
10as.	" " 4th "
6as.	" " 5th " and
4as.	" " 6th "

according to the satisfactions yielded by them severally. It is evident then that he will buy only 5 seers of sugar, because the 6th seer will afford him satisfaction worth 4 annas only, for which, however, he will have to pay 6 annas. From the 5 seers of sugar he derives an amount of satisfaction for which he would be willing to pay Rs 5. 8 as. in all, but he actually pays for it Re. 1. 14 as. only and gains thereby a

surplus of satisfaction worth Rs. 3. 10 as. (This excess of the satisfaction that a consumer derives from a commodity over the satisfaction that he loses in paying the price for it, is called consumer's surplus, and it is measured by the excess of the price that he would be willing to pay for it rather than go without it over the price that he actually does pay. In other words, consumer's surplus is measured by the difference between the subjective valuation of a thing made by a consumer and the actual or market value that he pays for it.)

(Consumer's surplus is closely related to the economic welfare of the people, for the more it is the greater is their well-being. It is obvious that the greatest consumer's surplus is derived from certain necessities like bread, salt, matches, books, newspapers, cheap bus and tramcar conveyances, postal and telegraphic services, etc., which are available to the citizens of a well developed country at very low prices, though they are of such a nature that the consumers would be willing to pay far higher prices for them.)

(Consumer's surplus is in fact the result of one's environment created by social progress. In an undeveloped country most of the needs and amenities of civilized life are either not available,

or are available at a very heavy cost. Moreover, owing to their heavy prices they are beyond the means of a large number of people comprising the poorer sections of the community. Thus discovery of new resources of wealth, inventions of better methods of production, improvements of organization, increasing supply of the necessities, comforts and amenities of life, and cheapening of products, which go with social progress, result in a large consumer's surplus for the community.)

2. (Some economists, however, maintain that the conception of consumer's surplus is of an hypothetical nature and of but little practical value. But the critics do not seem to have given sufficient thought to it. It is certainly true that the price that is paid by a consumer never exceeds, and is seldom equal to, the price that he would be willing to pay for a thing rather than go without it. Consumer's surplus therefore is not an hypothetical but a concrete thing; the vagueness about it lies in its exact amount, for it is indeed difficult to measure it.) We cannot, for example, measure it in the case of commodities of the class of absolute and conventional necessities, the first units of which yield us infinite utility, nor can we measure the consumer's surplus from a commodity to the market, where the buyers are

so many and of different means, habits and tastes. Not to speak of the market consumer's surplus, even the individual consumer's surplus has such an element of unreality about its amount that an exact measurement of it is impossible. (Scarcely does a consumer measure his surplus of satisfaction from a purchase in the same way before the transaction, when he felt for the commodity more keenly and had more money with him, as he does after the transaction, when his stock of money grows less and other wants loom large in his mind. If again, he is told that the commodity could really be had cheaper, or that there is a substitute available at a lower, or even at the same, price, he at once makes a different estimate of his surplus, and may even regret that he has had a negative rather than any positive surplus of satisfaction. But then these difficulties of measurement in no way affect the fact that in most cases consumers do derive a surplus of satisfaction.)

3 (With regard to the practical value of the conception it may be pointed out that it does influence a great deal a man's choice of the place of occupation and residence. Who would, for example, prefer a monthly income of Rs 5000 in Central Africa to an

Practical value
of consumer's
surplus

income of Rs 500 in Calcutta? The surplus of satisfaction derived from Rs 500 in Calcutta is manifold greater than that derived from Rs 5000 in Central Africa where many needs and amenities of a civilized existence are either not available, or available at a prohibitive cost far beyond the income earned. Secondly, again, it enables one to have an idea of the comparative welfare of men in different countries and in different ages. Moreover, the conception is of great practical value to the owners of public and private monopolies and to the administrative authorities. The state often undertakes many commercial functions like posts and telegraphs, irrigation, railways, etc. These public monopolies aim not so much at the earning of profits as at rendering service to the society at a fair price. They therefore have to see that the prices charged for their services enable the consumers to enjoy a large surplus of satisfaction. The private monopolists also should understand the nature of the commodities they produce. If they are necessities yielding large consumer's surplus, they can charge a fairly high price without losing profits, for the consumers will not decrease the demand even if the price be high; if they aim also to benefit society they may charge a low price so as to leave a large surplus

of satisfaction for the consumers. The administrative authorities also cannot ignore it in imposing taxes. A tax on necessities which yield a large consumer's surplus will produce a larger revenue than one on luxury, and any tax on a commodity which robs the people of all consumer's surplus will only frustrate itself, for the people will in that case buy none of it, and will probably take to substitutes, however inferior. Thus the conception of consumer's surplus has a great theoretical and practical value, and is a concrete thing, though the actual amount of it cannot be exactly measured.)

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Thomas—Elements of Economics, Chap. 4, pp. 56—59.

CHAPTER V

DEMAND

1. The law of diminishing utility is also intimately connected with the demand for things and in fact we can deduce from The Law of Demand it certain general rules or laws of demand. We have seen that with the increased supply of a commodity, its marginal utility falls. Naturally, (consumers increase their demand for it only when the price is lowered, from which it follows that with a fall of price there is an increase of demand. On the other hand, when the price rises consumers avoid buying those units of the commodity the satisfaction from which will be less than the price to be paid. This means that with the rise of the price there is a fall of demand.) We can now combine the two conclusions and state the law of demand¹ as follows :—Other things remaining the same, the amount demanded increases with a fall of price and decreases with a rise of price.

There is, however, no uniform relation between the rise of price and the fall of demand, or between the fall of price and the rise of demand. If, for example, the price rises by 20 p. c. the

demand may fall, not necessarily by 20 p. c., but by 10, 25, 30 or 50 p. c. according to the nature of the commodity.

(The law holds true if only other things[&] remain the same, but they may not. For example, a fall of price may not be followed by any rise of demand—on the contrary, there may be a fall of demand—if the commodity is for some reason disliked by the consumers, or if any substitutes for it are put on the market. Secondly, again, a rise in the price may not be followed by a fall of demand, if the commodity is an absolute or conventional necessary, or if the individual or community becomes more prosperous. Under some circumstances, in fact, demand may actually increase, though the price remains the same, or even rises considerably ; e. g. when there is some domestic or social ceremony, when people's income rises, when new uses are found out for the commodity and also when people's habit of using the commodity becomes stronger.)

2. (From the law of demand we are led to an interesting attribute of demand, namely, its elasticity. Demand) as we have seen, elasticity of demand (varies with the change of price. This variation of demand (i. e. increase or decrease) resulting from the change (i. e. decrease or increase) of price is called the.

elasticity of demand. With a slight rise of price demand may fall much or little; again, with a slight fall of price demand may rise much or little, according to the various conditions affecting it. Elasticity of demand is said to be great, if the demand rises much at a given fall of price or diminishes much at a given rise of price; it is said to be small, if the demand increases little at a given fall of price or diminishes little at a given rise in price.)

A clear understanding of the elasticity of demand for commodities is of great practical interest to businessmen and to the administrative authorities. (The monopolists should have a very clear conception of the elasticity of the demand for their products so that they may know what prices to charge. They can realise large profits by pitching the price high only when the demand for their products is of little elasticity, but otherwise it will be to their interest to charge a low price. No less is it important for the administrative authorities to take into a very consideration the elasticity of the demand for those commodities on which they contemplate the imposition of taxes. Goods of inelastic demand are very suitable objects for taxation, but those having demand of an elastic nature will yield but little revenues.)

(It is thus very necessary to know what commodities are of elastic demand and what are not. It is best for us to remember Rules of Elasticity for this purpose certain general rules governing the elasticity of demand,) and to consider the nature of the demand for any commodity in the light of these rules. It may be noted at the outset, that (the elasticity of demand for different goods differs, according to their kind and character. With the rise of the price, for example, the demand for an absolutely necessary article will fall but little, but that of a comfort or luxury may fall very considerably.) (The elasticity of demand for different goods varies also with the level of their prices, being small for goods of low prices, considerable for those of medium prices, and great for those of high prices, because of the fact that a rise of the prices of the goods of very low value does not materially alter the demand for them; and that of the goods of medium prices induces only the poorer sections to decrease their demand. A commodity of high value which is consumed only by the rich and the middle classes will have gr t elasticity of demand,) for the obvious reason that a rise of its price, which is already high, will considerably affect the pockets of both the classes, except perhaps of the exceptionally rich, and will therefore be followed

by a great fall of demand ; similarly a fall of its price will at once induce both the classes to buy more of it. (The third general rule that follows from the above is that the same commodity may have different elasticity of demand for different classes of people in a community, and also for different countries, according to the level of their income or economic prosperity. Sugar, for example, is a commodity well within the means of all classes of people in the United States, where the general level of income is very high, and so a little rise or fall of its price produces practically no effect upon the demand for it ; but in a poor country like India, where the average income does not exceed Rs. 50 per annum, (sugar is highly elastic in demand, even though it is not so for the richer classes of the Indian community.)

(As regards the particular classes of goods, the absolute and the conventional necessities will have the least elasticity of demand. But in a poor country like India even the demand for necessities such as, salt, is of considerable elasticity. Of course, in such countries, these goods are, of all classes of goods, the least elastic in demand. Necessaries of efficiency will be more or less elastic in demand according to their level of price. Highly expensive luxuries, like pearls and diamonds, gorgeous dress, fruits out of season, services of the best doctors and lawyers

costly furniture and motor-cars, precious wine, etc., have elastic demand for the rich and the upper middle class but inelastic demand for the poor and the lower middle classes, for the obvious reason that they are beyond the reach of the latter two classes even when their prices fall heavily. The demand for moderately expensive luxuries, like good dress, furniture and motor-cars, better kinds of fruits and fish, etc., will also be on the whole considerably elastic in demand, although not so for the rich and the poor classes in the community; for the former can, and the latter cannot, buy them at any price.)

(Goods which can be put to several uses, e. g. iron, electricity, wood, etc., have elastic demand. When their prices increase, people use them only for the urgent and important purposes, and so there is decreased demand for them. At a fall in price, however, the demand for them at once rises up. Lastly, commodities which are substitutes for one another will be very elastic in demand, for example, gas, oil and electricity; tea, cocoa and coffee; mutton and beef, etc. With the rise of the price of any of these articles, its demand at once falls, for the consumers can turn to any of the substitutes for the satisfaction of their wants.)

3. It follows from the foregoing discussions that in order to obtain a complete knowledge of the

An individual's demand nature of a man's demand for any commodity it will not be enough to know how much of it he demands at a particular price, but we shall have to ascertain the different amounts demanded by him at different prices. This is done by drawing his demand schedule, that is, a table of the amount demanded at each possible price. Let us, for example, suppose that a man is prepared to buy—

1 seer of sugar at Rs 2.	per lb.
2 seers " " " R 1. 8as. " "	
4 " " " " R 1. " "	
6 " " " " 12as. " "	
8 " " " " 8as. " "	

If the intermediate prices with the corresponding amounts demanded are also put down so as to furnish a complete list of the demands at the varying prices, then only can we really understand the nature of his demand.

We can similarly ascertain a market's demand for the commodity by drawing the market demand schedule. The market

Market demand for any commodity will, of course, be composed of the total demand of all the purchasers in the market. But as they are of different tastes and means, some being very rich, others poor, and still others occupying any intermediate positions between

the two classes, it is very difficult to have as correct a knowledge of the market demand as of an individual's demand. Nevertheless, it is possible for us to have a fairly approximate idea of the market demand by finding out an average customer and then drawing his demand schedule and ultimately by multiplying the amounts demanded by him at the different prices by the number of customers. It will give us the market demand schedule which will indicate the nature of the demand for the commodity, and also the amount that will be demanded at any particular price in the market. Of course, the accuracy or otherwise, of our estimate will depend upon whether we can find out a right average purchaser and the actual number of customers. It is certainly a difficult task, and so all that we can obtain is only a rough knowledge of the market demand for any commodity.

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- Marshall—Principles of Economics, Bk. III, Chap. IV.
Ely—Outlines of Economics, Chap. XI.

CHAPTER VI

PRODUCTIVE AND UNPRODUCTIVE CONSUMPTION

1. We have seen, in connection with the relation between consumption and production, that the two are co related. Consumption is not simply the end, but is also the means, of production. Unwise consumption of wealth ultimately reacts badly upon man's health and morals, and incapacitates him as a producer. Both the individual and the society should therefore aim at so to regulate consumption as will make it productive. Productive consumption means the use of such goods and services which preserve and increase the efficiency or productive powers of the consumer. Under this class, we may place the consumption of the necessities of life, the necessities of efficiency and the *desirable* conventional necessities. Some comforts, and also certain luxuries, which are objects of culture and refinement, may also be added, if the consumer can afford to pay for them. Of course, the productiveness or otherwise of these articles of consumption depends much upon the way in which they are

consumed. Some discussion on the proper mode of consumption will be found in the next chapter.

But any consumption that is harmful to the consumer is unproductive. The consumption of certain harmful luxuries, and of conventional necessities like intoxicating drugs and liquors, impairs the vitality of man, vitiates his mind and character and decreases his efficiency for production, and is therefore very legitimately regarded as unproductive. Harmful consumption also includes such goods, which are really beneficial when taken in right proportion and combination, but prove harmful when they are consumed without regard for proper combination and quantity.

2. (Consumption of luxuries has raised quite an interesting controversy. It is not very easy to say that a certain commodity

Luxury. is a luxury and that another is a comfort or a necessary. It all depends upon the time, and upon the means and position of the consumer. What is a luxury to-day may be a necessary to-morrow, and what is a luxury to one man may be a necessary or a comfort to another. It is best therefore to define luxury as "superfluous or excessive consumption". Naturally, it strikes one's mind whether the consumption of luxury is desirable. Luxuries are in

fact sometimes justified by some economists, and Voltaire, the French philosopher, has remarked that "Even the superfluous are necessary." The following arguments are generally advanced in justification of luxury :—

In the first place, it is said, that luxury has a stimulating effect upon production. Every new want is at first regarded as superfluous, but it is to satisfy new and newer wants that industries are started and fresh employments created. ^{It all} Moreover, many a man in society works hard ⁱⁿ in order that he may increase his income so as to enable himself, his wife and children to enjoy certain goods which may be regarded as luxuries. Secondly, luxuries are a sort of "safety margin" in times of domestic and national crisis. For example, the valuable ornaments and furniture stand in very good stead in times of domestic difficulty; when, again, there is a national crisis like a war, and the prices of goods rise very high and the incomes prove inadequate, the people may give up their luxuries and secure at least the necessities of life. Moreover, luxuries raise a man's standard of life, lead to the postponement of marriage and thereby make for a healthy and judicious growth of population in society. Lastly, it is contended that life is not all bread, and from the point of view of refine-

ment and culture; some luxuries are indeed desirable. Those who spend money in laying out gardens and parks, in building up good libraries, on the culture and progress of arts like music and painting, may be justified on the ground that they set a good example of living for others to imitate. Thus all luxuries need not be condemned—it all depends upon the consumer's income and the rank to which he belongs.)

(Exceptions, however, have been taken to all these arguments advanced in justification of luxury.

The critics of luxury do not deny. Objections to luxury that luxuries stimulate production and so 'make work' for people. It

is however only an apparent gain and prove harmful in the end, for more reasons than one. There are certain luxuries, which are of themselves harmful to the consumers, make them unfit for intellectual and physical work, and reacts badly upon their productive capacity. Moreover, the 'make work' argument applies to all uses made of our income and energy. A rich man spending lakhs of rupees in the celebration of a marriage ceremony does, of course, create works for several people whose services he requires for the purpose. But would not the money be better used if it were spent on charities like dispensaries, alms-houses, scholarships and stipends to meritorious scholars? Even if the money were

· simply deposited with a bank it would flow out into industries and create permanent sources of income for hundreds of people? Thirdly again, it can not always be contended that all luxuries add to the culture of a man. A man, who is ill-provided with the needs of existence and necessities of efficiency, can never be justified when he chooses to enjoy a luxury, the value of which he should rather spare for his unsatisfied necessities.

Moreover, if the rich persons roll in luxuries while the majority of men are as yet unprovided with the simple needs of life, many unhappy consequences may follow. It is obvious that producers will produce those goods in larger quantity which are in greater demand. The luxuries demanded by the rich thus divert a considerable portion of society's labour and capital away from those industries which supply the ordinary necessities of life and efficiency. The result is that the supply of these goods is far less than it otherwise could be, and the poorer people have to pay high prices for them. But as their income is low, it is not possible for them to provide themselves adequately with their ordinary needs of life. Workmen not only lose their efficiency on account of under-consumption but become morally weak and mentally discontented. They take to evil ways of life, commit crimes, and become easy prey to diseases.) Thus from economic, social and

oral points of view luxuries are harmful until the mass of the people are sufficiently provided with their necessities. People must live first before they can live better and lead a life of culture and refinement. It has therefore been well said that the best maxim for society to follow is "Necessaries for all before luxuries for any."

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CHAPTER VII

ECONOMY IN CONSUMPTION

1. The policy in consumption should be to derive the maximum satisfaction from it, and it is interesting to study the principles that should be followed for this purpose. Economy in consumption results from a scientific ordering of one's income and it involves a two-fold problem, namely, a judicious apportionment of income between the present and the future expenditure, and a wise ordering of the present expenditure. The first is concerned with the problem of spending versus saving, and the second with the mode of immediate consumption.

Some of our wants are immediate and others are remote. There are also some unforeseen expenses to be met in life : accidents, illness and old age, all require to be provided for beforehand. Hence it is prudent to save a part of one's income after making due provision for the present needs, but this saving should be of a productive character. There are several ways saving. A man, for example, may hoard or hide his money. This was, in fact, the original and primitive method of

saving wealth followed before the various forms of investments developed in society. In India, even now, this is the commonest mode of saving, though with the development of opportunities for profitable investments it is slowly being replaced. At present a man may invest his surplus wealth by way of loans to individuals, or deposits with banks; he may buy shares and debentures of industrial concerns and also of public loans. There are also the insurance companies and savings banks encouraging people to save. Investment in one form or another is more or less productive both to the investor and the community; but hoarded wealth lies idle, and however productive it may turn out to be in the future, it is certainly unproductive in the present. If it were invested, it would benefit the community by adding to its capital power, and would also bring in an income for the present to the owner. In this sense, therefore, saving in the form of hoarding involves an economic loss for the individual and the society alike. In any case, saving instinct, if not followed to the extreme, is a good social virtue: it increases society's capital, better equips it with tools, instruments and machinery, and enables it to utilise the natural resources, increases industries and employments, and thereby raises the level of economic prosperity.

But there are some people who in their craze for

saving. stint themselves of their necessities, and subject themselves to a voluntary poverty and inefficiency. At the other end of the social ladder, there are some highly rich people, who amass huge wealth and leave an immense fortune for their heirs. It is doubtful if this policy is beneficial to the heir himself and to the society as a whole. A large inheritance is very often a hindrance to the development of those faculties, powers and virtues in the heir whereby his ancestor earned his income and fortune. It is, therefore, often wise to leave just enough for the heir as will keep him above wants and enable him to take advantage of the opportunities for developing his mental, moral and physical powers, that will stand him in good stead when he faces the world himself. The rest of the wealth may very profitably be spent in ways that will benefit others in society. Moreover, if the people as a whole be satisfied with a low standard of life and minimum necessities, and refuse to spend for varieties of goods, industries will pine for want of customers, unemployment will ensue, to be followed by an all round deterioration of life, both material and spiritual. Thus we find that all saving is not necessarily good for the individual or society.

Whereas some owners of wealth go to one extreme believing that all saving is good for themselves and society, there are others who go to the

Spending opposite extreme and say that 'spending money makes trade good' that 'extravagance gives employment to labour'. It is true that industries cannot thrive if people do not spend, but if all people spend all their income away and save nothing, there will be no capital in the community to provide it with the necessary factories, tools and machines for productive enterprises. Moreover, if people spend extravagantly on harmful consumption the productive powers of the society will be seriously affected. Thus whereas expenditure on necessities, comforts and luxuries is necessary to keep the industries going, all expenditure and no saving on the part of individuals will, in its turn, bring misery both upon themselves and the community. We may, therefore, conclude that "real economy of consumption is secured by the mean between prodigality and parsimony."

2. The second problem in connection with economy of consumption is the mode of immediate consumption. In ordering it care should be taken to follow the principles of substitution, variety and harmony, which considerably increase the satisfaction from consumption (refer to pp. 33-35). With regard to the articles of food, it is also important to note that it is quality, and not quantity, that matters; and so the articles chosen should

possess highly nutrient properties and no useful part of them should be wasted. They should also be so prepared as to suit the taste and constitution of the consumer. Similar principles should also be followed in clothing. It is easy to understand that a good housewife can feed and clothe the members of her family much more satisfactorily and economically with a small income than an unskilful one with a much larger income. Lastly, goods consumed should possess existential and inclusive utility as opposed to temporary and exclusive utility. They should be, as far as possible, of lasting quality, without, of course, unnecessarily sacrificing good taste, so that they may yield satisfaction for a good length of time. Our satisfaction also multiplies when we share with others our consumption of things. Those people, for example, who are spending their income on building up good libraries, to which neighbours and friends are allowed free access, on educational institutions, hospitals and on works of other kinds of public utility, are indeed making a good use of their income to the satisfaction of both themselves and society.

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LEMENT OF ECONOMIC

OO III

PRODUCTION

CHAPTER I

NATURE AND FACTORS OF PRODUCTION

1. We have studied in Book II the nature and the laws of consumption and also the mode of securing economy in consumption. Book III deals with the production of wealth in modern communities.

The first question in connection with it is, What exactly is meant by production in economics?

Definition of Production In the physical world man cannot produce any new matter. The world's stock of matter is fixed;

man cannot increase or decrease it by even a single atom. When, therefore, he produces any wealth, he only changes the form or arrangements of the matters supplied by nature in such a way as will make them useful, or more useful, for his purpose. In other words, production in the economic sense means the creation of utilities only. Similarly, when he consumes anything he simply destroys its utility or want-satisfying capacity. But the matter composing it remains somewhere, in some shape or other.

A commodity, as we have seen (pp. 9—11), may possess five kinds of utility, viz. elementary for , place, time and possession utility. The

elementary utility of things is provided by nature herself and all that man does is to change the thing into the required shape, or to help nature to do it for him, as farmers do by sowing seeds in the soil, to convey it to the place where it is wanted and at the time when it is required, and also to bring it to the consumer before it can be put to use. Production, therefore, really means creation of *additional* utility of any kind, since the elementary utility is found in the thing itself. Production cannot be said to have been complete until the goods are in the right form, at the right place and time and also in the actual possession of the consumer, and so all activities of men creating any of these utilities, whether of material goods or personal services, must legitimately be regarded as productive. Naturally, therefore, production covers, not only the extractive and genetic industries, but also manufacture, commerce and transport as well as the personal and professional services of doctors, lawyers, teachers, domestic servants, etc.

2. From the previous section we can very well form an idea of the various kinds of (human efforts) for "getting a living." They (are in fact innumerable, but we can broadly classify them as the economically unproductive and productive occupations.)

(A man may acquire wealth by piracy, robbery,

theft, and swindling; he may also enrich himself by counterfeiting coins and paper money, or by practising adulteration of goods, and so on. These occupations are regarded as uneconomical or unproductive from the social point of view, because they not only do not add anything to the wealth of the community, but are also positively harmful. If society does not prohibit and repress them by law the total production of wealth will diminish, for in the absence of peace and order in the country, and in the uncertainty of reaping the fruits of one's honest toil, all serious attempts at the production of wealth will be discouraged.

The occupations, which are regarded as economically productive, refer to all those efforts of men which add to the sum of society's wealth.

A man may contribute to the wealth of his community by producing goods which are useful, and also by rendering honest services for honest pay. He is the richer for the income that he earns; so is the society. The various kinds of productive occupations may be classified as follows :—

I. There are, first of all, the Industrial Occupations, comprising the extractive industries, which appropriate materials from nature without

attempting at their reproduction, e. g., hunting, fishing, mining, securing gas from air, and power from wind and water, and the genetic industries, in which men make a conscious effort not only to reproduce but also to increase the supply of crops, plants and animals, e. g. agriculture, arboriculture, pisciculture, sericulture, etc. We should also bring under this class the various manufacturing industries that turn the raw-materials into partly finished and finished commodities. Of course, at each stage of production, the producer regards his commodity finished, though from the point of view of society, it may be only partly finished. For example, before the finished stage of a woven piece of cloth, the raw cotton passes through many transformations at the hands of several producers—there are the ginning mills, the spinning mills, and the weaving mills which may be owned and managed by entirely different sets of producers. But each group regards its own product as finished.)

II. (Then comes another class which may be designated as the Commercial Occupations, comprising all the distributive agencies, like wholesale and retail dealers, travelling salesmen, commission and advertising agents, who undertake the function of disposing of goods among the consumers and of bringing them to their notice, the transport industries, e. g., railways, shipping and air and road

transport of all kinds, and also the banking and insurance services, which do a great deal for the development of industries in a country.)

III. (Lastly, there are the Direct Services rendered to individual consumers and to the society as a whole, e. g., the works of doctors, lawyers, teachers, musicians, actors, civil servants and officials, soldiers, policemen, and so on.)

3. We shall now see what are the various factors that contribute to the production of wealth in a modern community. (The Factors of production most essential factors of production are Nature and Man. Nature

is the source of all matter, which, worked upon by man, turns into wealth. Nature is usually designated in economics as Land and the work of man is called Labour. Land therefore is taken to mean, not only the solid portion of the earth's surface, but also the watery regions, such as, rivers, lakes, streams, seas and oceans, as well as the forces of nature like air, water, heat, light rain and gravitation. As Prof. Marshall defines it, "By "Land" is meant not merely land in the strict sense of the word, but the whole of the material and the forces which Nature gives freely for man's aid, in land and water, in air and light and heat." Land alone can produce but little

wealth. She may supply for man various materials in crude, or even in the necessary form, but man must either turn them into proper form or bring them to the proper place at the right time, and also into his possession, before he can use it. Thus, unassisted by labour, land is impotent. Man may starve in a land of plenty, if he does not exert himself to put nature's bounty to a profitable use; he may again be highly prosperous even in a niggardly land, if he knows how to force her to yield to his wishes. Land, therefore, though a primary agent, is passive, whereas labour is the active agent of all production.) What labour exactly means, we shall know later on; (for the present, it is enough to know that (labour is the effort made by man for procuring the means of his material welfare.)

(In the primitive stage, when man was not very far above ordinary animals, he procured things as supplied by nature. But nature is not always kind, and the roots and fruits on which man lived were often whimsically denied him by her. Man, however, was not to be put off so easily. He was set at thinking as to how he could force nature to yield him enough materials for his purpose. It led him to devise tools and instruments for helping himself in his work of production, and also to save something out of his existing

wealth so that he might devote his time and thoughts to the invention and discoveries of new and effective means of producing in larger quantity. This surplus over his income, and the tools and instruments devised by him, may be said to have formed his Capital, which is the third factor of production. It is this capital which has enabled man to acquire greater and greater control over nature and to add to his material resources and welfare. In fact, a great step towards civilization was taken when the first hunting spear and the bow and, later on, the plough, were invented. Every addition to the capital resources of human society has enabled man to take a step forward in the march of civilization.)

(Production of wealth is not absolutely impossible without capital, for, as we have just seen, capital results from the wealth originally produced by the application of labour to land. The first ancestors of men knew but little of the use of capital, but all the same they did manage to live. But the importance of capital lies in the fact that without it man could produce but little, and with the increasing difficulties in his life he would find it hard to maintain his existence, had he not taken the help of capital in procuring his needs. If capital has been an aid to man from the beginning of civilization, its importance increased along with

its progress, while at present it has acquired a stupendous importance, so much so that the modern age has been aptly called the Era of Capitalism. A man possessing large capital has command over land and labour and can start any industry, if he has the requisite capacity. Now-a-days industry and commerce have become highly scientific and complex in character, and in many cases world-wide in competition. A man without large capital in his command has no more any room in the forefront of the industrial field, but has been thrown to the background by his stronger rivals.)

(Recent writers have added a fourth factor of production, viz., *Entrepreneurship* or *Enterprise*. The enterpriser's work is mainly directive, being concerned with the organization, policy and risk-taking, of the business.* In the previous stages of industrial organization, the producer was his own labourer, and so his work was not differentiated from labour. But in modern times industry has become highly complex and scientific, the producer and the labourer are very often distinct, and the work of the producer is of a higher kind than that of the mere labourer. "When among the agents in production labour is distinguished from enterprise, "labour" means executive power and "enterprise" means initiating, directing and designing power."

Although only a higher form of labour; yet owing to the peculiarly important role that it plays in modern industry, entrepreneurship is regarded as a fourth factor of production. The factors are, in fact, reducible to two, namely, land and labour, because capital is a product of land and labour, and enterprise is only a higher form of labour.)

We shall now take up these factors of production one by one, and study their nature and functions and also the forces that determine their supply and productive capacity.

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CHAPTER II

LAND

1. Land is one of the two primary factors of production. We shall first see what exactly are the functions of land, and in what ways it contributes its services to production. (Firstly, it is obvious that land furnishes man with space, on which he can rest and move about, and erect houses to live in, and factories and workshops in which to run his business. It contains certain chemical properties in its soil, which, together with the natural forces of air, light, heat and rain, favour the growth of vegetation and crops, and enable man to produce foodstuffs and rawmaterials for various kinds of industries. It provides sustenance not only to man but also to innumerable other animals, that are used by man as live instruments of production, or as games to provide meat, hides and skins, bones, etc., and also as objects of curios. Moreover, land contains beneath its surface many natural products of immense value to man, e.g., coal, iron, copper, silver, gold and various other minerals. The importance of land as a source of a country's material prosperity will be apparent from the

fact that the 'richness of the soil, the rivers and streams, the configuration and indentations of the coast line, the climatic conditions and mineral resources, for the very basis of her wealth, and determine to a great extent the level of her civilization and culture.)

(In order to understand the forces that affect the productivity of land, we should first notice certain peculiar features of land as a factor of production... For the sake of

Peculiarities of Land

convenience, we shall keep in view the land, as understood in the narrow sense, that is, agricultural and building land, although the features are equally noticeable in all natural agents. The most obvious thing about land is that, unlike other factors of production, it is limited in quantity, and this limitation is permanent. Labour, capital and enterprise, can increase or decrease with the change of demand and for them, but land, which is a free gift of nature, is almost a fixed quantity, of course, from the point of view of society as a whole. A landowner may refuse to let his land, if the rent is not high enough; he may let his land, if a satisfactory rent be offered. But his action does not affect the total quantity of land in society.)

and Another important feature is that the plots of land vary in productivity, the use of their

differences in fertility and situational advantages. Fertility differs be use of the differences of the chemical composition of the soil and of the climatic factors, such as, heat, light and rain. In India, for example, there are the rich Gangetic plains as well as the waste lands in the desert tracts of Rajputana ; there are gravelly hill-sides and marshy bogs ; the north-eastern parts of the country are well favoured by kindly rivers and monsoons whereas the north-western parts including Sind do not get sufficient or regular rainfall. These natural factors determine to a large extent the fertility of different plots of land.)

(But however fertile a plot may be, it may prove unproductive, if the market where the produce is to be sold be not accessible from it. A piece of land, intrinsically less fertile, may prove more productive than a more fertile plot, if the farmer can convey his produce to the market in less time and at lower transport charges. Hence the productivity of land depends partially upon the facilities of transport. In the case of agricultural land, both fertility and situation are important, but in the case of building land it is situation that determines its productivity)*

3. The productivity of agricultural land depends, as we have just seen, upon fertility and situation. ut land, unaided by, man and capital

Productivity of agricultural land cannot produce much. It is man who multiplies the productivity of land by scientific processes of agriculture. The farmer prepares the soil and the seed bed, selects the crops and seeds which are most suitable to his land, and destroys the weeds that retard the growth of the crop. Agriculture depends upon sufficient water supply which may involve two things: excess of water should be drained out by means of good drainage arrangements, and dearth of water, resulting from insufficient and irregular rainfall has to be made good by artificial irrigation. The farmer should also adopt a proper rotation of crops so that each crop raised may leave the land at such a time and in such a condition that the land may be worked up and prepared easily for the next crop, and may also recoup its exhausted fertility to some extent with the decomposed remnants of the crop raised. Moreover, artificial manure should be applied in order to enable the land to recoup itself fully or even to increase its fertility. The farmer, again, should have the requisite means for applying sufficient labour and capital, for even a highly productive land will fail to give a good account of itself, if it is cultivated with inadequate capital and labour. Productivity of land, therefore,

depends upon a number of things—upon its fertility and situation and also upon the means, knowledge and skill of the farmer.

It should, however, be noted that productivity of land is a relative thing : it is relative to the use made of it, to the means of communication, to the means and knowledge of the farmer, and also to the growth of population in society. A plot of land may be more productive for wheat than for any other crop ; another plot may be unproductive for crops but productive for pasture. The situational advantage also may increase or decrease with the change in the facilities of communication connecting the land with the market. Progress of the science and arts of agriculture again may turn an unproductive land into a productive one. Increase of population and the consequent growth of the demand for crops may also make it profitable for a farmer to cultivate a piece of land that was not worth the trouble before.

4. One fundamental fact about agricultural production is that it is subject to what is known as (the Law of Diminishing Returns.)

The Law of Diminishing Returns It (not only affects agriculture but all other kinds of production as well, including manufacture and transport. (The law, as it operates in agriculture, may be thus stated :—

LAND

"An increase in the amount of labour and capital applied in the cultivation of land causes in general a less than proportionate increase in the amount of produce raised".* That is to say, if a farmer applies more and more "doses" of labour and capital to the same plot of land, he will have, other things remaining the same, an increasing supply of crops no doubt, but the increase in the amount of crops will be less than proportionate to the increase of the amounts of labour and capital. The illustration, given in the table below, will help us to understand the point clearly :—

Units of labour and capital.	Total amount of produce in maunds of wheat.	Amount added by successive units.
1	50	50
2	90	40
3	120	30
4	140	20
5	150	10
6	156	6

It has been assumed in the illustration above that each unit of labour and capital is worth Rs 10.

* Marshall—Economics of Industry, Bk. IV, Chap. III—1.

A farmer, by applying one unit of labour and capital, raises 50 maunds of wheat ; when he applies two units he realises 90 maunds in all. Thus the second unit increases the supply, not by 50 or more, but by 40 maunds only. The third unit adds 30, the fourth 20, the fifth 10, and the sixth adds only 6 maunds. If the market value of wheat stands at Re. 1 per maund, the farmer will apply only five units of labour and capital, in as much as the sixth unit, which is worth Rs 10, will yield only 6 maunds of wheat worth Rs 6, and will thus bring him a loss of Rs 4.)

(An increase of labour and capital applied to the same piece of land is thus *generally* followed by a diminishing return, and the cause of it lies in the fact that land is a limited factor : its quantity is, of course, limited ; and its fertility also cannot be increased beyond a certain limit, because the chemical properties of the soil and air, heat, light and rain, that determine the quality of the soil, can be but little improved upon, or modified, by man, beyond a certain point. In any case, it is assumed that while the farmer applies more and more labour and capital, the other factors, namely, the quantity and quality of land and the methods of agriculture, remain the same.)

(But the phrase "in general" is very significant. There may be cases where increasing, or constant

return, may prevail, though temporarily; that is, to say, for some time the increase in the amount of crops raised may be more than proportionate, or proportionate, to the increase in the amount of labour and capital applied. A farmer, for example, may not have enough means to invest sufficient labour and capital and may also cultivate the land negligently; if, however, his means improve, and he cultivates his land more carefully and with sufficient labour and capital, the land may yield him an increasing return for some time at least. Moreover, it takes time for the soil to develop its productive powers to the full: the chemical properties of the soil that lie hidden below must be brought into proper relation with the other forces of nature so that the seeds and the plants may take the fullest advantage of them. This may take time, several processes of tillage and careful handling of the soil may be required before the full powers of the soil are called out. Till then the farmer will reap increasing returns to the increasing application of labour and capital, though diminishing return is bound to assert itself ultimately after that point, unless, of course, fresh improvements of other kinds are made in the meantime. In fact, there may be a progress of the science and arts of agriculture itself: use of better seeds and

anture, better selection and rotation of crops, adoption of better implements and machinery, arrangement for proper drainage and irrigation, etc., will enable the farmer to realise increasing return. But when the new improvements work themselves out fully, a stage is reached when further application of labour and capital to the same plot of land is followed by diminishing return.)

(The Law, therefore, speaks of a tendency, which can be held in check only for a time but never permanently. Whatever may be the future improvements in the arts of agriculture, a continued pressure upon land will ultimately result in produce less than proportionate to the increase in the application of labour and capital.) (Both the ordinary case of Diminishing Return and the exceptional cases noted above can be represented by diagrams of a similar kind as Figures 3 and 2 respectively in the Appendix.)

(The above law exerts its influence most upon the extractive and genetic industries, because of all factors of production in these industries, land is by far the most important. Man may assist land, quicken Nature's action, and thereby make the seeds and plants grow a little quicker; but Nature cannot be forced to work beyond a certain rate. Wherever, therefore, Nature

Wider appli-
cation of the
Law

is supreme production will be subject to the law of diminishing return. But the law does operate in all industries more or less, because land is a universal and indispensable factor in every kind of production. Its effects, however, are less pronounced in manufacture, commerce and transport because it is Man who is more important than Land in such industries. Man can increase both the quality and quantity of his labour, capital and organization to a great extent and in any industry where Land, supplying standing room and raw materials, plays but a minor role, and Man's labour, capital and enterprise are supremely important, the producer will obtain increasing return to the increasing application of labour and capital. It is why Diminishing Return obtains in agriculture where Nature is supreme, and Increasing Return rules *generally* in manufacture where Man plays the more important role. But even in manufacture, there is a stage of maximum economy, after which, if all other factors keep constant, but only labour, or only capital, be increased, the increase in the output will be less than proportionate to the increase of labour, or of capital. Suppose, for example, that all the labourers and machines in industry are fully occupied, and there is maximum efficiency in production. If at this stage more labourers be employed, but they are

not equipped with extra machinery, each labourer will have now less work to do per head; or if the number of labourers keeps fixed, but more machines are added, some of the machines must be kept idle, or if all are run simultaneously, each will work for less time. The result will be that even if the output increases, the increase will not be proportionate to the increase of labour, or of capital.)

We are, therefore, in a position to give a wider significance to the Law of Diminishing Return and say that other things remaining the same, the expansion of an industry is followed by diminishing return, if additional supply of some factor of production, that is essentially required, cannot be secured.

5. (We have laid stress on the influence of the law of diminishing return upon those industries which depend most upon Nature.

Scope of the Law. Hence its influence is quickly felt

in agriculture, building, fisheries and mining. As more and more storeys are added to a building there is continuously higher proportionate cost. The river and shore fisheries have, after all, a limited space and a limited supply of fish, owing to which they do not yield increasing return to the increased application of labour and capital. Opinions, however, differ with regard to

deep-sea fisheries. Some say that the sea has an unlimited space and an inexhaustible supply of fish, and so increasing return is obtained from deep-sea fisheries. But others are of opinion that the sea, in spite of its vast space, has got certain definite areas or colonies of fish, where alone they can be had in abundance. These fish regions are, however, limited both in space and in the supply of fish, and so they too are not immune from the effects of diminishing return.)

(The same principle holds good in mining as well. As a mine is worked deeper and deeper the cost per unit of minerals raised goes on increasing. Although with greater knowledge of the nature of mines, with improvements in the skill of miners and in the arts of mining there may be obtained for some time an increasing return, yet, other things remaining the same, the continued application of labour and capital is sure to be followed by a diminishing rate of output. But the operation of the principle in mining is not similar to that in agriculture and fishing. An agricultural land is a permanent source of crops; a fishery, if left worked for some time, recoups itself; but a mine has got a fixed store of minerals, and once it is removed, the mine is exhausted for good. As Marshall says, "The supply of agricultural produce and of fish is a perennial stream...; mines are as it were Nature's

"reservoir". In manufacture and transport, as we have seen, Nature plays a subordinate role, and so for a long time increasing return may be obtained; but even there, if at any time any factor of production, absolutely necessary, cannot be increased along with the increase of other factors, the influence of the law will certainly be felt.)

The tendency to diminishing return is an unhappy fact to be reckoned with, for agriculture is the primary industry on which man has to depend for the supply of his food-crops and raw materials. The tendency of diminishing return in agriculture grows acute with the increase of population and the need for increased supply of crops.

It is therefore necessary for man to adopt measures for counteracting the tendency to diminishing return. We have already known (pp. 87-88) three different circumstances under which increasing return can be obtained from land. Apart from these cases it may also be noted that too many men might be depending on income from land, owing to which the income per head of the population falls low, to be followed by a general lowering of the standard of living and of efficiency. This is a situation now actually prevailing in India. Natural growth of population and loss of employments resulting from the decay of cottage industries in the

nineteenth century have induced more and more people to depend on agriculture, to work petty fragmented holdings and to keep satisfied with poor income and low standard of life. Under such circumstances no improved system of agriculture is possible : experiments of the soil, use of better seeds and anures, adoption of a proper rotation of crops, use of machinery, proper drainage and irrigational arrangements, etc., are beyond the means of peasants, owning and tilling petty holdings and earning poor incomes. Hence arises the necessity of developing manufacturing industries and diverting some part of the population to industrial lines so as to enable those who stick to agriculture to earn larger incomes and adopt improved methods of agriculture.

England and some of the continental countries got rid of the difficulty of feeding their growing population not only by developing agriculture and manufactures but also by importing cheaper corns from abroad, encouraging emigration and founding colonies in the newly discovered lands. But such scope is fast becoming hopelessly limited. Natural increase of population and the growing age of the country and its soil will only hasten the advent of Diminishing Return. Improvements of agriculture may push back the operations of the Law for some years or generations, but the problem

has to be faced some day. It is wise, therefore, for a well-sized population, inhabiting a fairly old country, to regulate its own growth, both by individual and social effort.

7. (All plots of land, as we have seen, are not equally productive, because of their differences in fertility and situation. With the growing demand for crops, more crops may be raised by an increased application of labour and capital to the same plot of land ; that is, each plot may be more and more intensively cultivated. But owing to the law of diminishing return, continuous increase of labour and capital applied to the same plot proves unproductive at a certain stage, and fresh application of labour and capital may prove productive on a new, even though inferior, piece of land. As population increases and demand for crops rises, more and more land is thus brought under cultivation ; in other words, extensive cultivation is taken recourse to. In fact, both extensive and intensive cultivation go on simultaneously in society, because as extensive cultivation proceeds, better plots of land are all the more intensively cultivated till the last unit of labour and capital on all the plots, good and bad, yields the same return. Let us take this illustration :

Suppose there are three plots of land A,

and C, mentioned in order of their productivity. Let us also assume that the price per maund of wheat in the market is Re. 1 and that each dose of labour and capital is worth Rs. 10. Let the yields in maunds from the successive units of labour and capital on the different plots be as given in the table below :—

Grades of land	1st Dose	2nd Dose	3rd Dose	4th Dose
A	40	30	20	10
B	25	18	10	
C	10			

It is evident from the figures that while the price of wheat stands at Re. 1 per maund, 4 doses of labour and capital will be applied to A, 3 to B, and one only to C. On all the plots the last dose yields the same return, and it just repays the farmer. There are two margins of cultivation—the extensive margin referring to the marginal land or the worst plot worth using (as C in the above illustration), and the intensive margin referring to that stage of cultivation where the last dose of labour and capital just repays the expenses of cultivation and yields

no surplus to the farmer)(the fourth, the third, and the first, dose on A, B and C respectively).

. From the illustration given in the previous section we can very well understand how the net productivity of a piece of land is to be ascertained. The farmer raises 100, 53 and 10 maunds of wheat from A, B and C at the cost of Rs. 40, 30 and 10 respectively, and from the sale proceeds of the crops he enjoys a surplus production of Rs. 60, 23 and 0. The net productivity of a piece of land is thus measured by the Producer's Surplus, that is, the surplus left over the full expenses of cultivation including, of course, a fair reward to the farmer for his work and management.

. It is interesting to study how the law of diminishing return has affected civilization, and in fact, the very nature of mankind. It forced man to leave his place of birth and to venture into new lands for his livelihood. It led to the migration of the Aryans from their original homes in Central Asia, and to spread civilization on the face of the globe. It is the same force that has compelled man to probe into the mysteries of nature, to invent new and better methods of agriculture, and to develop various kinds of industries. The same fundamental law made

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law of Dimin-
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it difficult for a growing population to procure its subsistence from land, and thus induced it to conquer new land, to found colonies and to enter into a strife for markets. It is the difficulty of procuring food that hurled different tribes and nations into wars and feuds, and brought them either into friendly or inimical relations, to be followed by results good and bad. If land had yielded an increasing, or even a constant, return, there would be practically no difficulty in procuring one's subsistence, and man would be perhaps less selfish, less greedy, less energetic, less resourceful, and most of the economic, social and political problems that perplex the modern world would not perhaps be heard of. To know the law of diminishing return is therefore to put one's fingers on the very spot that let loose the forces that have played a large part in determining human nature and civilization.

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CHAPTER III

LABOUR

1. The next factor of production that we shall deal with is Labour. Like most other economic expressions, 'labour' also has a technical meaning, for certain kinds of labour popularly so called, are not *economic* labour. We may define it, after Jevons and Marshall, as any exertion of mind or body, undergone by human beings, partly or wholly with a view to some direct economic gain apart from the pleasure derived directly from it. Thus defined labour refers to human labour only, and as such, excludes from it the work of ordinary animals which are appropriately regarded as a part of capital, called 'live stock'. Secondly, labour may be both mental and physical, and must be undergone not for the pleasure of it—for all labour affords some pleasure—nor out of love and affection for somebody, but mainly for the purpose of directly earning an income from it. A footballer, playing for the mere joy of the game and without having the object of directly 'getting a living' thereby, is not undergoing any labour in the economic sense.

labour, Govt. (definition)

Similarly, a father teaching his own child, or a wife nursing her sick husband as well as the men rendering honorary services out of a sense of moral duty, are not regarded as undergoing any economic labour, in as much as there is in them no direct motive for earning an income.

2. There has been a good deal of controversy as to what labour is productive and what

is not. The Physiocrats, a group of eighteenth century French economists, believed that real production meant creation of material things

that satisfy human wants, and so according to them the labour engaged in extractive and genetic industries only was productive; and they regarded the labour of manufacturers, merchants, transporters, as unproductive, because they do not produce any material things, but only help the goods produced by the extractive and genetic industries to reach the ultimate consumers in a different form or at a different place. This opinion, however, has no logical foundation. Man

not create material things. When he is said to produce anything, he only procures the matter from nature and adds to its essential utility a further utility by changing its form or arrangement. Again, production cannot be said to have been complete until the wealth produced is in

the required form, and at the right place and time for the intending consumer. In the whole process of production, from the raw stage of a commodity to the actual possession of it by the final consumer, it may be handled by a number of persons, the farmer giving it one form, the manufacturer changing it into a different form so as to make it more useful, the transporter carrying it to the place where it is wanted, the wholesale and retail dealers keeping it in stock at the right place and time for the consumer, the consumer himself going on shopping and securing the possession of the commodity, all are engaged in productive labour.

While, however, the labour of these persons was ultimately regarded as productive, some economists still refused to admit that the producers of quack medicine, intoxicating drugs and liquors, bad literature, and other harmful commodities, were in any sense engaged in productive labour; nor would they bring under the class the personal services of doctors, lawyers, actors, civil and military servants, domestic servants, etc. All this confusion has really followed from a wrong conception of production. "The essence of production is that it leads to satisfactions or utilities"* which may assume the form of some

*Tausig—Principles, Vol. I. Chap. 2.

material things or personal services, no matter whether they are beneficial, or otherwise. Thus the labour of the persons just referred to must also be legitimately regarded as productive.

Any labour, however, which, when directed to produce some utility, fails to produce it, is unproductive. If, for example, a man engages a number of labourers, and sinks much capital, in prospecting a mine, but ultimately finds that the mine hoped for is not there, all the labour is unproductive. Of course, it is productive to the labourers who get their wages all right, but economists must regard it otherwise, because from the social point of view it is a sheer waste, having failed to bring into existence a utility towards which it was directed. Yet there is another sense in which labour may be unproductive. If there be too many persons engaged in any work, each of them is, of course, producing some utility, however little; but all the same, there is involved some social wastage of labour. If, for example, two men be at a plough where one would suffice, there is a waste of labour. Similarly, the existence of too many doctors, too many lawyers, too many middlemen between the grower of crops and the ultimate consumer, or between the landlord and the tiller of the soil, entails a certain wastage of society's labour power. Thirdly again, under the category of unproductive labour, may come the labour of thieves,

robbers, pirates, swindlers, smashers, etc., who live by dishonest labour, deprive others of the fruits of their honest toil, and bring about an atmosphere of disorder and unrest that discourages all honest effort for the production of wealth in the community.

3. The total labour power in a community is determined by two factors, namely, the number of labourers and their skill or efficiency.

Supply of
labour.

The number of workers may remain the same, but if their efficiency doubles, that it is to say, if in a given period, one workman can do a work which was previously done by two, the total supply of labour may be said to have doubled; again, the number of labourers may increase or decrease, but the supply of labour may remain the same, if simultaneously there is a proportionate decrease or increase of the skill of individual workmen. The number and the skill of workmen are, in their turn, dependent on various factors to which we shall now devote our attention.

The total number of labourers in a country is not identical with the total population, because there is in every community a large section that undergoes no labour in the economic sense. For example, the children who are not old enough to go to work, those women and the old and decrepit men who do no work of any productive character,

must be excluded from the 'working' section of the population. To this class of non-productive members must also be added the thieves, robbers, smashers and other criminal classes together with the parasitic elements like the beggars and mendicants, never-do-weels, etc. The numerical strength of labour therefore is determined by the number of the working population which, in its turn, is governed by the rate at which the total population multiplies itself.

4. (The study of the growth of population has been engaging the minds of man from very early times, but a systematic study of it

althus's
Theory of
Population. Malthus, a Cambridge wrangler
(1766-1834). He became much

concerned at the squalor and distress and the consequent physical and moral degeneration of his countrymen at the time, and this he attributed to the excessive growth of population in the past, and believed that it would be in the future as well. He embodied his researches in his famous book, 'An Essay on the Principle of Population' published in 1798, which was, however, partially modified in the second edition, in the light of fresh thoughts that occurred to him on the subject. His theory of population, as finally presented by him, may be thus briefly stated :—)

I. (He proceeds from the fundamental fact of

Diminishing Return affecting the growth of food supply, and says that food supply can not be increased at the pleasure of man, but an imperious instinct of man for procreation results in an increase of population even against his will. Population increases in a geometrical ratio, that is, at the rate of 1, 2, 4, 8, 16, 32, and so on, whereas food supply increases in an arithmetical ratio, that is, at the rate of 1, 2, 3, 4, 5, 6, and so on. Population therefore has the tendency to grow much faster than food supply, unless, of course, the forces leading to the growth of population are counteracted by other forces.)

II. (This tendency of man towards excessive multiplication may be counteracted by two classes of checks. There are the positive checks, like infanticide, starvation, war, diseases and famine, that prevent the growth of population by increasing the number of deaths ; and there are also certain preventive checks that man may adopt himself voluntarily ; for example, celibacy, postponement of marriage till late in life, prudential restraints in married life, etc., that retard the growth of population by decreasing the number of births in the community.)

III. (Malthus concludes that the positive checks leave the life of men entirely dislocated. So the people should, in order to avoid misery

and distress, adopt the preventive checks. If the latter are ignored, nature will set the positive checks to operate and to cut population down to the size which she can decently maintain.)

5. (Many economists have criticised Malthus's theory, and said that it is neither scientific, nor supported by the experience of the West, in the nineteenth and twentieth centuries,

Criticism of
Malthus's
Theory.

and that the relation between the growth of food supply and of population, cannot be reduced to a mathematical proportion as has been done by Malthus.)

(The two main props on which his doctrine stands are that Diminishing Return will operate ceaselessly and will make it increasingly difficult to raise sufficient food stuffs, and that the procreative instinct of man will work unhampered to lead to a rapid growth of population in a country. But since Malthus wrote his Essay there have been at work certain forces that have increased food supply fast enough, and other forces that have retarded the growth of population. Improvements in transport, opening up of new sources of food supply in the United States, Australia, Argentine and other places, progress of the science and arts of agriculture, extensive cultivation of virgin land and intensive cultivation of the old soil, have

enabled the western peoples to procure food stuffs more cheaply and in greater quantity. On the other hand, encouragement of emigration and the founding of colonies have enabled them to get rid of surplus population. Moreover, as experience shows, growing civilization with its progress of culture and refinement diminishes human fecundity; economic pressure and rising standard of living also increase the sense of parental responsibility and curb the procreative instinct of man, and there is an automatic fall of the birth rate in society. Malthus, the critics would say, was therefore too pessimistic, and drew an unnecessarily gloomy picture of the future of mankind.)

(In reply to these criticisms, however, it may be pointed out that population in the western countries could not grow faster than food supply, not simply because of the improvements resulting in an increased supply of foodstuffs and the automatic fall of population from the growth of the sense of parental responsibility, but also because of many positive checks, like destructive wars and epidemics, and conscious adoption of preventive checks, including artificial methods of birth control which would perhaps never receive the approval of Malthus. But new sources of food supply cannot be ever and ever discovered by all nations together. Scope for new colonies and

upon the climatic conditions. In hot climates people attain maturity earlier than in cold and temperate regions owing to which they marry at a comparatively early age. It is why hot and warm countries generally show a higher birth rate than the cold and temperate ones. Social and religious customs also in a community exert a great influence upon its growth in number. The compulsory marriage of Hindu girls—though this is now no more the case—and the practice of polygamy in India, for example, tend to increase the rate of birth; whereas prohibition of widow remarriage prevailing until recently among the caste Hindus, and the practice of celibacy by some religious sects tend to decrease it. The standard of living in a society is also a powerful factor affecting the number of marriages and offspring. A high standard naturally leads to the postponement of marriage and to fewer children. It is evident from the comparative birth rates in the Western and the Eastern countries. In the West the standard of life is higher, and the birth rate is lower, than in the East. This difference is noticed also among the various classes in the same community. The average number of children born among the rich and the middle class families is smaller than that among the peasants and artisans, who, owing to their

lower standard of life, can afford to marry earlier. It is why in every country population increases by a large addition not from the classes at the top but from those at the bottom.

The death rate in a country is governed mainly by the economic conditions of the people. In an economically poor country with its insufficient food and clothing, insanitary living and scanty medical help, the death rate is very high. In countries like India and China, where low standard of living leads to a very high birth rate, is also noticed a high death rate. It is but natural, Industrial backwardness, low income, earlier marriages, high birth rate, insufficient food and clothing, bad housing conditions and want of proper medical help, are responsible for starvation, low vitality, diseases and epidemics resulting in a high death rate.

The other factor affecting the growth of population in a country is migration of people both into, and out of, it.

7. We are now in a position to consider both the Malthusian theory and the modern theory of population in the light of the circumstances prevailing in India. The census taken every ten years gives us a fairly accurate information with regard to the numerical progress of population

Population
in India

in India, but unfortunately there is no statistical evidence to show the rate at which wealth has increased. Without going into an examination of the different opinions regarding the increase of wealth in India, one may say that the poverty of India and all the attendant evils and distress are facts, and no statistics can make one blind to the acute poverty of the masses in India. "Although it seems quite possible to maintain with fair degree of certainty that the masses of the Indian population, at least in some parts of the country, are gradually improving in their economic condition, it must be borne in mind that a very large proportion of the inhabitants of India is still beset with poverty of a kind which finds no parallel in the more exigent because less tropical climates, of western lands. Such improvement as is taking place proceeds with *painful slowness*."*

This painfully slow improvement of the economic condition in India is due to a number of causes. The soil has been continuously forced to yield more and yet more crops, but the old agricultural methods have still been adhered to in the greater portion of the country. Cowdung was practically the only manure used for fertilising the

* India in 1923-24, p. 193 (Report, Government of India)
Italics ours.

land; but with the gradual destruction of forests, people began to use dried and caked cowdung as fuel. Many rivers and streams that once served as nature's fertilising agents have been silted up and they no more send their life-giving currents up into the interior to fertilise the land around. The general poverty of the agriculturists resulting from petty and fragmented holdings, low income, under consumption, diseases, cattle epidemics, etc., have burdened them with heavy indebtedness, which in many cases runs from generation to generation. No improvement of agriculture is possible under such circumstances. The cottage industries, which were once the means of livelihood for millions fell into a moribund condition owing to the unequal competition of machine products and the general ignorance and the failure of the cottage workers to adapt themselves to the changing methods of production. Most of those who lost their occupation fell back upon agriculture. Thus natural increase of population within, the growing demand for Indian crops from without, and the cottage workers who took to agriculture, all put too much pressure upon land which has failed to provide the agriculturists with increasing, or even constant, return. The result has been that food production, taking the country as a whole, has increased but at

a diminishing rate per dose of labour and capital applied. Whatever great industries of any importance have been started are mainly exotic in ownership and management, and the children of the soil get little more than the wages earned by them in such industries. India has vast agricultural, mineral and forest wealth, but these natural resources have not been properly utilised. All these facts explain the "painful slowness" of the improvements of the economic condition in India.

While food supply, and for the matter of that wealth, has increased but slowly, population, on the other hand, has increased at a fairly good rate. We have seen in the previous section how the climatic conditions and some social and religious customs, such as, child marriage, compulsory marriage of Hindu girls and polygamy, have acted in favour of a rapid growth of population in India. Even the joint-family system is not without its influence upon such growth, for it lessens the sense of parental responsibility and encourages early marriage by making the members rely, not on their individual income, but on the joint income of the family. The peace under the British regime and the low standard of life have further helped the growth of population. The only preventive

checks in force, as we have seen, are the prohibition of widow re-marriage among the caste Hindus and the practice of celibacy among some religious sects, which however exert but little effect upon the growth of population resulting from so many powerful forces.

Thus whereas population has been increasing wealth has increased comparatively slowly. The result is as Malthus predicted. The positive checks are in full operation : under—consumption, starvation, want of clothing, bad housing conditions, diseases and epidemics, infantile mortality, famine, etc.; are taking a heavy toll of victims every year. It is, therefore, not very inaccurate to say that at present India is suffering from an overgrowth of population.

. But this statement requires to be a little examined, so that its true implication may be clear.

The Census Commissioner for 1921 Over-growth of population in India says "It is perhaps not an unreasonable estimate to place the probable natural increment in India at the present stage of development, and apart from exceptional calamities, at between 7 and 8 per cent. in the decade." The rate considered absolutely, does not indicate an abnormal growth of population in India. It is just equal to that in Norway, Sweden, Portugal, Spain and Italy, and less than the rate of

growth in Great Britain, Central Europe, the United States and British Dominions. But normality, or otherwise, of the growth of population is relative to the growth of wealth in the community. India has not improved her agricultural system, nor has she developed the resources of wealth placed at her disposal by Nature. When, therefore, it is said that India is suffering from an overgrowth of population, it is not meant that her population has grown so excessive that she cannot maintain it efficiently even with her productive capacity developed to the full, but it means that her population is larger than she can decently maintain under the existing conditions of her productive capacity.

. The growth of population in a country naturally causes some anxiety as to how to preserve national efficiency and vigour. The problem of population has to be faced by nations differently according to their respective circumstances. There are certain features of a perfectly well balanced population. It should be neither too small nor too large, but large enough to provide the requisite amount of labour power for its productive enterprises. Moreover, the total labour strength should be so distributed among the various occupations in society that there may not be a dearth of labour in any occupation

or want of employment anywhere. The aggregate production of wealth also should be large enough to meet the material and spiritual needs of the community, and for this purpose the wealth should be not only large, but fairly distributed among the individuals. Of course, such a balanced economic society is nowhere to be found. It is only an ideal, a mere mark towards which social efforts should be directed. Thus, population problem is a rather complex thing, involving regulation of the growth of population, education and training of individuals for just the kind of work for which each is fit and also finding them employment of the kind they are fit for, production of sufficient wealth, and distribution of the same in a fair way among the individuals so as to avoid the extremes of riches and of poverty.

The four aspects of the question really seem to be insoluble by mere individual effort and initiative. There are, in society, many diseased and decrepit persons who should not marry and beget children; there are some who undertake family responsibilities too early, and others again who allow the instinct for reproduction to get the better of their prudence and to bring to earth children whom they cannot rear up as worthy and useful members of the society. Or it may be, as in France, people may go to the opposite

extreme, and adopt such measures as will decrease the numerical strength of the population, and lead to race suicide. Want of education and training, and lack of foresight, may prevent a satisfactory occupational distribution of the people as a result of which there may be too little labour for one industry and too much for another. Resources of wealth may be left unutilised, or when utilised under the guidance and initiative of some energetic individuals, the latter's greed and selfishness and love of acquisition may lead to unfair distribution of wealth and to extreme riches on the one hand and to extreme poverty on the other. Most of the Western countries have devised and adopted very efficient methods of production and have utilised their resources in such a manner that their aggregate wealth has increased much faster than their population. But, all the same, a great discontent prevails there among the working population owing to the concentration of the greater portion of the wealth into the hands of a few families. This discontent ultimately leads to much social unrest that bursts forth into bloody revolutions at times, as it has already done in Russia.

Without minimising the importance and moral value of individual initiative; it may be legitimately concluded that no satisfactory solution of the fourfold problem of population is possible without

social control and initiative. In fact, the trend of modern thought and practice in the West is towards social regulation of these four aspects of the problem.

10. We have thus far discussed the various forces regulating the growth of population in a country that determines the numerical strength of her working population. The present section deals with efficiency of labour that is another factor determining the total supply of labour. It depends upon the workers' capacity for work and their will to work. The capacity for work comes from the physical, mental, moral and technical qualities of the workmen.)

The climatic conditions exert a great influence upon man's health and working capacity. The people of temperate and dry climates are physically stronger than those of the hotter and damper regions, and possess more stamina for standing the strain of longer hours of work. There are also the racial qualities to be taken into account. Some races have fine perception of beauty and good artistic taste, while others are coarse ; some are by nature tenacious and serious, while others are negligent and easy-going. Productivity also requires that the workmen should be provided with sufficient food, clothing and house-rooms in the absence of

which they will, of course, grow physically weak. The general conditions under which workmen live and work also affect their health and vigour. Ill-ventilated, smoky and dusty factories and mills and bad housing conditions undermine their health and incapacitate them for hard work. Improvement of sanitation in the factory areas and industrial centres, and good housing arrangements, are invariably followed by an increase in the productivity of workmen. Again, continuous work for long hours is sure to undermine the workmen's health and efficiency.

Apart from physical fitness, the workmen should possess certain mental qualities, like intelligence, breadth of perception, good judgment and imagination, and also some moral qualities, such as, punctuality, honesty, sense of duty, sobriety, etc. The producer gains many advantages from such workmen. He can rely on their honesty and common sense, owing to which much of the cost of supervision, waste of materials, damage to tools and machinery as well as shirking of duty by workmen, can be avoided. But in order to make the working power of the labourers effective, it is necessary that they should have, apart from some general education to develop their mental and moral powers, some technical training as well, so that they may do their work

efficiently with the least expenditure of time and energy.

No good result, however, can be obtained from unwilling workmen. Love of work and the incentive for it can be found only in those workers who hope to rise to higher stations in life, who are free, and have opportunities for rest and recreation. It is why slave labour is always inefficient. The slave has no hope of a better lot, no freedom of will and initiative, and no relief from the dull monotony of his existence, owing to which he feels no incentive for putting his heart and energy into the work. Moreover, poor as the workers generally are, they work well when they are paid regularly and in time. Certain social laws and customs also are not without their influence upon the willingness of workmen to undergo labour. The joint-family and the caste system in India, though they have any good effects, have the tendency to dull the incentive for work, in as much as the one makes the member of a family depend on joint income, and the other chains the worker down to his hereditary occupation, although he might have neither the inclination nor the aptitude for it.

Lastly, we may add that however efficient the individual workmen may be, they must be

properly organised and guided by expert managers who should have the ability to detect the skill of the individual workmen, to allot them just the work for which each is fit, and to arouse in them a sense of loyalty, and of honesty and duty. Under an expert manager even a bad workman turns out good, and under an unwise and unsympathetic master, even an efficient worker fails to give a good account of himself.

11. (Indian labour is notorious for its low efficiency. The causes of its inefficiency are not far to seek. The warm climate of the country has an energizing effect and makes it difficult for a workman to work for some hours at a stretch. The Indian labourer, therefore, is less energetic and has less tenacity of purpose than the English or the German labourer. Again, he has a very low standard of life and takes upon himself family responsibilities rather early; the result is that he very often fails to procure more than bare necessities of life. His intellectual and moral qualities too have not been properly developed by any suitable system of education and so he is neither skilful, nor endowed with good judgment and imagination, nor is he as honest and dutiful as his Western brethren. The joint-family

system and the laws of inheritance have prevented the growth of a class of homeless and property-less labourers—the proletariat—but they have made the Indian workmen unambitious and irregular. They are rural at heart, and when the wage falls low they do not grumble, but run away home as soon as some money has been accumulated. Indian labour, therefore, is mostly of a migratory character—a feature that accounts for the ill-organization of labour, and the slow growth of trade unions, in India.)

(The Indian caste system again has, no doubt, the merit of transmitting skill from generation to generation, and the children, brought up in the atmosphere of their caste occupation, acquire the skill for it unconsciously and without any training. But the skill of the child becomes limited by that of the father, and having no free choice of occupation nor any competition to face out-side his own narrow groove, he does not feel the incentive for developing his skill, or striking out new methods of production, or for producing new designs and patterns. In this way, his skill tends to stagnate. As the members of one caste cannot adopt the professions of other castes, a carpenter must remain a carpenter all through his life, although he might have great aptitude for weaving; a cobbler having the genius and the inclination for teaching, only aspires after

the moon. In this way, much skill and genius goes to waste, and society becomes the poorer for it. To add to these all, India has not produced any considerable number of expert business-men to organise, and train up, the labourers. The Non-Indian enterprisers in India have no doubt done something in this direction, but there must be a host of native enterprisers with broad outlook and sympathy, if the labour force of the country is to be of an efficient character.)

(All these factors have combined against the efficiency of Indian workmen. Their productivity in most industries is very low, and naturally they earn but low wages. It is because of this low wage-level in India that the Indian labour is sometimes said to be cheap. ut considering its low productivity it is really dearer than Western labour. In fact, cheap labour and inefficiency go together. There is, however, no cause for despair. The Indian Industrial Commission had evidence to show from the Tata Iron and Steel Works at Jamshedpur that Indian labourers, under proper guidance and training, are capable of being as efficient as their Western compeers.)

12. The economic prosperity of a nation depends upon its Natural and Human resources. But man is the more active factor of the two. Nature may be kind, but she herself does little for

man, if he does not take advantage of her bounty; even if she chooses to be unkind, man can, by his intelligence and energy, turn her to be gracious towards him. It is the human factor, therefore, that plays the chief part in moulding the economic life of a nation, from which it follows that it is very necessary on the part of a nation to develop the productive capacity of its working population. Productivity of labour, as we have seen, depends upon a number of things of which physical fitness of workmen, their mental qualities like intelligence, judgment and imagination, and moral qualities like honesty, sense of duty, punctuality, etc., are very important. These qualities, however, are not the monopoly of any particular race. Though they are partly inborn, they can be acquired as well by a suitable system of education, and the acquired qualities of one generation may be transmitted to the next. Education, therefore, has an important bearing upon the efficiency of labour and on the material welfare of a country.

Education, however, comes not simply from schools and colleges. The home exercises a powerful educative influence upon a man's life. The parents, brothers and sisters, and even the servants, create the domestic atmosphere, and the

child learns a great deal from what he sees and hears about him at home. Next comes the influence of one's social environment. It is well-known that children born and bred in villages are less intelligent, less energetic and less informed than those who are brought up in industrial towns and centres; and the company which the child keeps outside his domestic atmosphere exerts a considerable influence upon his intellect and morals. The third factor is, of course, the schools and colleges, where the students are made to go through certain courses of study in a variety of subjects. It is, of course, true: that higher education is mainly for those who will take to the learned professions and will extend the bounds of science and add to the nation's wealth in art and literature, and also for those who will direct the economic activities and manage business concerns as employers and managers, or work as supervisors and foremen, but good education is necessary for all.

It is obvious that at present much natural ability in society runs to waste for want of education. It is difficult to resist the temptation of quoting Professor Marshall's words on this subject. "The laws which govern the birth of genius are inscrutable. It is probable that the percentage of children of the working classes, who

are endowed with natural abilities of the highest order, is not so great as that of the children of people, who have attained or have inherited a higher position in society. But since the manual labour classes are four or five times as numerous as all other classes put together, it is not unlikely that more than half the best natural genius that is born into the country belongs to them; and of this a great part is fruitless for want of opportunity. There is no extravagance more prejudicial to the growth of national wealth than that wasteful negligence which allows genius that happens to be born of lowly parentage to expend itself in lowly work. No change would conduce so much to a rapid increase of material wealth as an improvement in our schools, and specially those of the middle grades; provided it is combined with an extensive system of scholarships, which will enable the clever son of a working man to rise gradually from school to school till he had the best theoretical and practical education which the age can give."* Considering the fact that out of 247 millions of inhabitants in British India 18·6 millions only are literate, one must shudder to think what a frightful waste of human talents and genius is going on in India.

*Economics of Industry, BK. IV. VI. 4.

Education has two aspects which may be distinguished as General and Technical. General education quickens the intelligence of a man, makes him inquisitive and arouses his sense of honesty and duty. It broadens his outlook and makes him more reliable as a workman. But the knowledge imparted by general education is of a theoretical character; in order to be an efficient producer in any line of industry a man must also acquire some practical training in the art of doing things. General ability developed by cultural and literary education is more or less necessary in all occupations, but every trade or industry has some special processes of work that demand special manual skill and acquaintance with the tools and materials of the industry. For this manual skill and special knowledge, technical and commercial education becomes necessary, specially so in modern times because of the complexity and vastness of modern business organization, and the mechanical and scientific processes involved in the factory system of production. Those who take to purely literary pursuits of life may do without technical education, but the rest in society require some vocational training so that after their educational career they may at once find their right places in the economic scheme of the society; and may not drift aim-

lessly in pursuit of occupations and employments. The educational system in India is defective in that it is mostly literary and cultural, little attention being paid by people and educational authorities to vocational training. The result has been that as long as the supply of educated men did not outstrip the demand for them in the learned and neat-handed occupations, there was but little distress from unemployment. But now that large batches of scholars come out from the universities, they find that they are not required in the factories and mills, nor even in the commercial and transport industries. For these purposes they are unskilful, inefficient. The employers complain that there is not enough labour, and the people complain that there are not enough employments, in the country. Yet both are in the right. The former demand trained labour, which is but little in India; and the latter find that their skill is of the kind which is not wanted by owners of business firms. This is all due to the defective educational system obtaining in this country. In the course of a lecture at St. Andrews University, Froude remarked that if technical education does not go along with the three R's, it soon produces a fourth R—Rascaldom. Fortunately, however, this defect has already attracted notice, and efforts are being made to

remove it. At then, ill-adjustment of the supply of, and demand for, labour will exist, unless, along with the increase of trained workers, there be a parallel growth of industrial employments in the country.

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CHAPTER IV

CAPITAL

1. We shall now deal with Capital, the third factor of production. (The meaning of this term also has not been immune from controversy.

Definition of capital

It may be considered from the point of view of society and from that of the individual, and failure to grasp the difference between the two aspects of capital results in much confusion and faulty discussion. Socially regarded capital is that part of the wealth of a community, apart from land, which is used, or intended to be used, for further production of wealth. All wealth, therefore, is not capital; only that part of it, which is used, or intended to be used, as an aid to land and labour, for the production of fresh wealth, is capital. The same wealth, therefore, may be capital or non-capital according as it is used as an instrument of further production, or as an object of direct consumption. For example, that part of the grains of a cultivator, which he intends to use as seeds for the next harvest, and for paying the wages of his labourers, or for buying the necessary implements, cattle and manure, will legitimately

be regarded as capital; but any part of it that is directly consumed by the farmer and his family, or used by him for charity, is not regarded as capital. A glass of milk is capital if the consumer thinks that it will supply him with fresh energy for further production, but it is not capital if he drinks it as an object of mere gratification. Again, a man's hoard is not capital, though it may be turned into capital as soon as it is used, or intended to be used, for a productive purpose. The best way then to distinguish between capital and non-capital is to consider the intended use of the wealth; for as we have seen, the distinction is at bottom a psychological one.)

(Some economists say that any wealth which increases income is capital, and then they argue that real income is nothing but satisfaction, and as all wealth yields income by way of satisfaction, all wealth should be regarded as capital. This conception of capital may have the merit of definiteness but it is neither serviceable nor does it accord with the popular meaning of the term. Although, therefore, they identify capital with wealth yet a line of distinction must be drawn somewhere. Marshall puts it well when he says, "We should speak of Capital when considering things as agents of production; and we should speak of Wealth when considering them as results of production, as subjects

of consumption and as yielding pleasures of possession.")

(This is the meaning of capital as understood from the social point of view. ut regarded from the point of view of the individual, capital may be defined as that part of the wealth of a man from which he derives, or expects to derive, an income, either in the form of fresh wealth produced with its help or in the fo of money income. An individual's capital may be also social capital if it is used as an aid to land and labour for the production of new wealth. ut the chief point of difference between the two lies in the fact that a man's capital, which is sold or hired or lent out and is used for purposes other than production, brings an income to the owner but adds nothing directly to the existing stock of the nation's wealth; and so though capital to the individual, it is not capital to the society. In order, therefore, to avoid confusion we should define capital from both the points of view, and say that socially regarded, capital is that part of the wealth of a community which is used or intended to be used as aid to land and labour for fresh production of wealth, and regarded from the point of view of the individual capital is that part of a m 's wealth from which he derives, or expects to derive, an in me.)

2. (In discussing the functions of capital as a factor of production it is the social sense of it which should be kept in view.

Nature and Functions of capital Social capital, as we have learnt, is that part of the wealth which is used, or intended to be used, for the production of new wealth. Not that capital can produce anything by itself; but it has a productivity of its own in the sense that land and labour can produce more wealth with capital than they can without it. The farmer, who works his land with the plough and the cattle, manure and other forms of capital, can produce much more crops with much less effort than one who merely scratches the soil and scatters the seeds over it. The labourers can produce in a given period far more units of a product when they are well provided with the necessary tools and machinery than they can without the help of such instruments. The producers require factories, workshops, warehouses, machinery, etc., before the actual operations of production begin; they have to buy raw-materials and fuel and to pay the wages of workmen far in advance of the sale of the products. It is capital that provides them all these instruments of production and increases the productivity of Man and Nature; and it is for this productiveness that capital is demanded)

(The function of capital, therefore, is to aid land and labour in production, and it fulfils that function in several ways: it provides the community with the buildings, factories and mills required in production, supplies the tools and machinery and also the means whereby the producer is enabled to procure the raw-materials, fuel and power and to pay the wages of workmen during the period of production.) We shall now see how capital actually originates.

A man has got many accidents and unforeseen expenses to meet and also to make provision against the rainy day. The more vividly can he foresee the difficulties and needs of the future, the greater will be his willingness to provide against them by saving something out of his present income. Whereas, therefore, the subjective basis of capital is man's *prospectiveness*, that is, his habit of looking forward and of making provision for the future, its objective basis is the saving out of his income.

4. (Capital may not only be regarded from different points of view but, may also assume different forms. It has, therefore, been classified in various ways. We have already seen the distinction between Social and Individual capital. A man's

Forms of capital.

individual capital, in the sense in which the term capital is ordinarily understood, consists of what may be called his Trade Capital, that is, all the stock of wealth that he uses, or intends to use, for production of new wealth or for earning an income by selling, hiring, or lending, it out to others. As such it will consist of (i) his business plant, that is to say, the factory and raw materials, the machinery, and the food, clothing and house-rooms that he provides to his workmen, as well as the good will of his business; (ii) all his land, buildings and movable property that brings him a money income; and (iii) the investments made by him by way of loans to others, deposits with banks or in shares and debentures of productive enterprises and public loans. Of course, all the debts that he owes to others must be deducted from his capital. Some economists would like to add the professional skill of an individual to his capital. But this is not counted as capital, nor even as wealth, in the ordinary business life. In any case, should it be regarded necessary to bring in personal qualities and skill under the category of capital it should be designated as Personal Capital. Those economists, again, who would identify capital with wealth evidently because every wealth has a capital value and is a potential capital, would regard even the consumption goods, such as, food, clothing, house-

rooms, furniture, etc., used by the owner personally, as capital; and they call it Consumption Capital in order to distinguish it from his trade capital.)

(The trade capital, again, is divided into Production and Lucrative Capital. The former consists of all those goods which are used for the direct production of more goods, and the latter of all those goods from which the owner earns a money income by selling, hiring, or lending them out. For example, a man's factory building used by himself in production is his production capital; but when it is sold or hired out, it becomes lucrative capital to him. Similarly, a sum of money, if used by the owner for feeding, or paying, his employees, or for buying raw materials and machinery, is his production capital; but it becomes lucrative capital to him when it is lent out to a borrower or deposited with a bank. It is really looking at the two characteristics of capital, namely, its 'productivity' and 'rentability'. The one is its natural and essential characteristic, and the other is an acquired one, acquired in a society that recognises private ownership of property involving the right to selling, hiring and lending. Capital may lose its rentability in a society that recognises no private ownership of property, but it will ever retain its productivity.)

(The meaning of Social Capital) has been sufficiently indicated in section I of this chapter. This,

as we have seen, (refers to the production capital only of the community, composed of the production capital of the individuals and also the Public Capital of the community; e. g., state railway and irrigational systems, public buildings, ports, harbours and dockyards, etc. All the lucrative and consumption capital of individuals are thus excluded from social capital. Moreover, land which is a free gift of nature to the community, is not a part of social capital: capital is immediate product resulting from the cooperation of land and labour; and as, such, as a factor of production, capital should be kept distinct from land. To an individual, however, land is not a free gift of nature. He can lease, or sell, it out for earning a money income, and so very legitimately regards it as his capital. Land, however, may form a part of social capital to the extent of the improvements made upon it by social effort. The river Thames, for example, should be regarded as a part of England's capital.)

(Social capital has been variously classified, but, as we shall see, the classifications are not strictly logical, for there is much overlapping of divisions. It is sometimes classified as Auxiliary or Instrumental Capital and Remuneratory or Consumer's Capital. The former refers to all

those goods that directly aid labour in production; e. g., factory buildings, machinery, raw materials, fuel, etc., and the latter consists of the wealth that is applied to the payment or remuneration of the employees in the form of wages, food, clothing, houserooms, etc. According to another classification capital is said to be either Fixed or Circulating. Fixed capital refers to all those goods which are durable in character and aid production for a considerable length of time; e. g., machinery, buildings, office-furniture, etc.; but circulating capital "fulfills its office" by a single use and its value passes once for all into that of the finished product; e. g., seeds, raw materials, fuel and money paid away in wages, etc. Yet according to a third classification, capital is said to be either Specialised or Non-specialised. Specialised capital, sometimes called sunk capital, consists of goods which are designed for only one kind of production and so cannot be changed or recovered without great loss; e. g., a sewing machine which can do nothing but sewing work, capital invested in tunnelling, drainage, etc. Non-specialised or floating capital refers to those goods which can be changed in form at any time and may be employed in any industry; e. g., those factory buildings that can be used for different

industries, raw materials, fuel, stocks and shares and money.)

5. We have so far known the nature, origin, functions and forms of capital. (The growth of capital in a community is determined by the accumulation of Growth of wealth wealth, resulting from the savings of the people. The uses and conditions governing the accumulation of wealth vary in different communities and in different ages. We may, however, classify them as *subjective* and *objective*, the former affecting the people's will to save, and the latter their capacity to save.

The subjective causes of the accumulation of capital are, firstly, the people's foresight or the power of foreseeing the future needs and difficulties and, secondly, certain motives impelling them to save; for example, the desire to provide for old age, accidents and unforeseen expenses of life, to leave the family above wants and in plenty, and also to increase its social prestige. There are some men who save out of the mere love of saving. A very powerful motive that partially gathers its strength from the above is to earn an income by way of interest and profits from loans and business investments.)

(But mere will to save is not enough. The external conditions and circumstances must also be

favourable, so that people may have the capacity to save. It is obvious that the very first condition of all saving is that the people's income should be large enough to leave a surplus over the necessary expenses of life. A high level of income leaves a large surplus that makes large saving possible, but contrary result will follow if the income level be low. But no one will feel disposed to save anything under the uncertainty of reaping the fruits of one's own labour. Hence it is also necessary that there should be security of life and property in the country. The growth of capital has been greatly helped by the scope for profitable investments as afforded by certain institutions like banks and joint-stock companies. Certain other institutions, again, directly encourage and develop the saving habit of the people; for example, savings banks, insurance companies, co-operative societies, the provident fund system, etc.)

(The savings in a community are also considerably affected by its laws and customs. The lavish expenditures in 'Sradh', marriage and funeral ceremonies in India and in ball-dancing in the West, lead to a not inconsiderable waste of capital in the countries concerned. Lastly, it may be mentioned that the replacement of barter by metallic and paper money as medium of exchange in society makes for a larger growth of capital, for people find it

more convenient and safe to store up their surplus wealth in money because of its greater fixity of value, small bulk and less liability to damage and destruction.)

(The subjective causes of saving, namely, foresight and certain motives for saving are present

more or less in all civilized communities, but the objective conditions differ widely in different countries.

growth of
capital in India

In India, for example, the growth of capital is too small to supply all the capital that she needs for developing her resources. The reasons are not far to seek. The external conditions favourable to the growth of large capital were mostly non-existent before the advent of the British. In the later Mughal period, there was much political disturbance in the country, life and property were insecure, and industry and commerce were greatly hampered. Banks, joint-stock companies, insurance companies, savings banks and provident fund system, were scarcely known. Although money was in use yet barter was universally practised in the country. Under such conditions much capital could not grow, and a large part of the savings was locked up either as hoards or as ornaments.

But with the consolidation of the British rule in India life and property have become secure.

People now find greater scope for profitable investments of their savings in the banks and industrial companies, and their saving habit has been encouraged by the development of all those institutions already referred to. Barter also has been practically replaced by money. All these forces have led to a considerable saving and growth of capital in India in recent years. But as these forces are only of recent growth, the accumulation of capital has been rather slow. Moreover, the level of income is so low in India that people in general have but little surplus left over their necessary expenses. To make the situation worse, the customary lavishness of expenditure in social and religious ceremonies is responsible for the waste of quite a considerable amount of saving. It is not strange, therefore, that India should be ill equipped with capital, owing to which she has been forced to depend on foreign capital for the development of her resources and industries.)

7. The terms Capital and Income are generally associated together. In order to grasp the relation between the two we should first know in what sense the term 'income' is generally used in every day life and in economics. Income, in daily life, refers to the gains from work and property, and may assume four forms: wages and salary from

labour, rent from land, interest from capital, and profits from business enterprise. In modern society where value is measured in terms of money, income has come to mean money income; but it need not necessarily be in money, only it should "be capable of being transmuted into money income."* In fact, income may be in the form of goods and services as well, as in fact it was, when money was scarcely used, and rent, interest and wages were paid in kind. But whether the income comes in the form of goods or money, it ultimately reduces itself to the inflow of satisfactions derived directly or indirectly from goods or money by the owner as a consumer. Income, therefore, may assume three forms—satisfaction income or 'usance', as Marshall calls it, money income and goods income.

Contrasted with capital, income is a flow of gains in the form of satisfaction, money or goods; whereas capital is a stock of wealth from which income flows. Capital is said to be Consumption Capital when the income from it is in the form of satisfaction, Lucrative or Acquisitive Capital when it is in the form of money, and Production Capital when in conjunction with land and labour it produces ore goods. The reader is already familiar with these three forms of capital. Capital is thus

*Seligman—Principles, Chap. I. § 6.

one of the sources of income ; but it is out of the savings from income again that pital arises ; that is to say, income when stored up forms pital to yield fr h income.

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CHAPTER V

THE ENTREPRENEUR

1. We have studied, in the three preceding chapters, three of the factors of production — land labour and capital — and the various forces that determine their supply and efficiency. But however efficient they may individually be, they will fail to show their best results unless they are properly co-ordinated and organized. The man who does it is known as the Entrepreneur or Enterpriser who is the fourth factor of production. The entrepreneur is a product of modern industry and how he came to occupy an important position in it will be stated in the next chapter. In the section that follows we shall study the importance of the entrepreneur in modern industrial organization.

2. Before the development of the means of communication the villages and towns were economically independent of one another, each supplying its own simple needs itself. Fashions and tastes, and the methods of production, continued unchanged for years. The market was local and small, demand came mostly direct from customers and needed no anticipation. Capital in the form of

simple tools and raw materials was also well within the reach of the ordinary craftsman.

But now-a-days the organization and methods of production have been completely revolutionized by certain forces which have been discussed in the next chapter. Markets are no more local, but have grown national or international; gigantic mills and factories have replaced the old home industries in most cases and each engages a vast number of labourers. Demand has to be anticipated and raw materials have often to be procured from distant lands and finished goods are to be sent to any part of the world wherever they can secure good prices. Fashions and tastes undergo rapid changes, and new inventions of machinery and of the art of management throw the older machines and methods out of place. Modern business with its vastness and complexity has grown into a discipline of science and art, and such it requires a new type of producers who must possess shrewd insight into men and things, and ability and resources of an order far superior to what the master craftsmen of former days possessed. The entrepreneur now stands as the central figure in modern business. The factors of production cannot show their best results, unless properly organized, and wisely controlled and guided, by him; and in his absence they become dis-

organized, and the business collapses. He is, therefore, rightly regarded as the 'Captain of Industry.'

3. We can now very well form an idea of the functions of a modern entrepreneur. They are twofold—organizing and risk-taking. As an orga-

nizer, it is he who first decides
 Functions of the entrepreneur the sort of industry to be started

and builds it up from the very start. He hires land and buildings, engages the labourers and procures the money capital needed for purchasing the necessary raw materials and machinery and for the payment of the wages and rent, etc. He arranges for the guidance and supervision of the workmen and tries to avoid all waste of labour, machinery and materials. In other words, he has to co-ordinate the three other factors of production so as to secure the maximum economy from them. The entrepreneur has to decide the amount, design and style of the goods to be produced and also to fix their prices. He has also to arrange for advertising, canvassing and sale of the products in the best market.

As a risk-taker, he assumes the whole risk of the business himself. He has to anticipate demand and produce goods in advance. He has often to introduce new designs and patterns which may succeed or fail. He must study the forces of demand and supply, which may prove

correct or otherwise. Moreover, he has to face many accidents, expensive law-suits and periods of dull business. Every industrial undertaking, therefore, involves risk, more or less. The persons, who lend him the services of their land, labour and capital, get their rent, wages and interest, whether the business runs well or ill; but they never share with him any loss that might come, nor do they get any share of the profits either. By exercising his judgment and making all possible economy of management he tries to lower his cost of production, minimises risks and earns his profits; but the whole of the loss, that may result from his miscalculation, ill judgment and wrong policy, falls upon himself alone.

It may, however, be noted that in modern business, as in the present day joint-stock companies, the two functions may largely be dissociated, for very often it is the salaried manager who does most of the organizing work, whereas the risk is taken by the shareholders.

4. For fulfilling the important functions that the entrepreneur takes upon himself, he must possess certain qualities, which are partly inborn

and partly acquired by training and experience. He should, first of all, possess certain moral qualities, like courage to take

Qualifications
for entrepre-
neurship

risk, good judgment and foresight ; and secondly, a practical genius for business organization which involves a thorough knowledge of things and of men.

He must know, for example, the sort of raw materials required, and the place whence they can be procured most cheaply. He should also be thoroughly acquainted with the tools and machinery required for his business, and must keep himself well informed of the changes and improvement in the methods of production, and of the market conditions that might affect the demand and supply of his products.

Secondly, the entrepreneur should be a shrewd judge of human nature and possess the natural genius of a leader of men. He ought to be able to detect the abilities of men under him, so that he may appoint them to the kind of work most suited to their individual capacity. He must understand them sympathetically and ought to be able to arouse their enthusiasm and loyalty, so that they may take a personal interest in the business.

Such ideal entrepreneurs are, however, rare, and even the best of them fall far short of this ideal. Moreover, modern entrepreneurship is not all perfect, and society does not always gain from it. Competent entrepreneurs increase the productive efficiency

of a community by effecti ly organizing the factors of production and by correctly anticipating the deeper forces affecting their business; but much of the productive powers of the community runs to waste at the hands of incompetent entrepreneurs.

engal has had in recent years some very sad experiences of industrial ventures. The wave of the Swadeshi spirit that arose in the first de de of this century encouraged some Bengalees to start any insurance companies, banking fi s and other joint stock companies. People, out of patriotic feelings, did not hesitate to entrust the new native enterprisers with their capital. Labour was employed; land, buildings and pital flowed in. But unfortunately, most of these enterprisers were novices in the art of industrial management and leadership; not a few of them were dishonest. The result was that most of the ventures came down like ninepins and the investors were rudely shaken out of their confidence. But the failures are perhaps the pillars on which industrial success in engal is going to be built: the shareholders now understand their rights and duties and are growing intelligent enough to gauge fairly accurately the prospects of an industry before investing their capital; the enterprisers also are now more educated in the science and art of industrial

organization and have learnt that it is honesty that pays ultimately. Some waste of capital and labour that results from unwise entrepreneurship is the price that New India will perhaps have to pay, for some time yet, for training in business organization.

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CHAPTER VI

THE STAGES OF PRODUCTION

1. The modern industrial organization cannot be properly understood without a knowledge of the different stages through which it has evolved.

We may notice three chief periods of industrial evolution; namely, the Agricultural Stage, the Craft or Artisan Stage and the Factory Stage. It is true that human industry passed from the Natural to the Pastoral Stage before it reached the stage of agriculture. But all the same, it is convenient to begin our study from the agricultural stage because human society did not reach till then any settled state of life.

The Agricultural Stage of industry began when man learnt the rudiments of agriculture and no more roamed about in search of food. He settled in a definite territory and built for himself a home where he lived permanently with his family. Several families living near one another formed the villages which lay at a good distance from one another, as they do in agricultural society. At the

beginning of the agricultural stage, each family, consisting of all the men, women and children as well as the slaves and serfs belonging to it, was an economic unit, in the sense that all its needs were supplied by the labour of the members of the family and there was but little economic interdependence between families. This stage, therefore, may be characterized as the stage of Household Industry.

Agriculture was the predominant occupation of the people and the rest of their economic activities were only subordinate to agriculture. There was no distinction between the producer and the labourer; nor was there any production for sale, for exchange existed but little at this stage, though it did develop towards the latter part of it when, in fact, the next phase of industry, the handicraft stage, began.

3. The Handicraft stage, also called the Artisan stage, is the second phase of industrial evolution which appeared towards the middle ages.

Population increased and human wants also multiplied. A family could no more depend on itself for the supply of its economic needs, and hence arose the necessity of depending on other families. The increased population gave scope to people for specialisation in the produc-

tion of certain goods for sale to the *customer* and it was thus that the exchange system involving a group of buyers and sellers was developed in society, and the various crafts like the smithy, carpentry, pottery, shoe-making, weaving, etc., originated in the villages and towns, each of which now became an economic unit in the place of the old family unit.

The economic features of this stage were that the craftsmen produced on a small scale either to order or for the village or town market. He was the *master* who had his own simple tools, supplied his own raw materials, hired no labour on the wage-system, as we know in modern times, but worked either in the houses of his customers or at his own home with the labour of the members of his family and apprentices. The merits of this system of production lay in the independence of the small producers, the affectionate and sympathetic relation between them and their apprentices, work in the moral and healthy atmosphere of the home and absence of great inequality of wealth in society and of social discontent.

Subsequently, however, the artisan-stage acquired some new features. When communication improved and the market for goods became wider still, the master craftsmen, with their ignorance of the needs and tastes of distant buyers and their sc ty

resources for production on a large scale, found themselves in a difficult position. This brought a new figure in the economic life of society—the *merchant* or *entrepreneur* who, with his knowledge of the outside world and larger means, stood as the middleman between the master craftsmen and the customers. The entrepreneur was not a mere wholesale dealer but something more. As the artisans were too poor to buy large quantity of raw materials needed for larger scale of production, the entrepreneur supplied the necessary raw materials which the artisans turned into finished goods in their own homes and generally with their own tools. Having been paid their remuneration, they handed over the finished products to the entrepreneur to whom the goods actually belonged. The risk of production and of the sale of the products was thus undertaken by the entrepreneur. It was from this time that the artisans began to lose their independence and to depend more and more on the entrepreneur. As the industries were still carried on in the homes of the artisans this stage of industry is also called the period of Domestic Industry as distinguished from the Household Industry of the previous stage.

4. Subsequent developments led to the modern system of production which may be designated as the Factory Stage. A 'factory', originally

The Factory
Stage and
Orga ed
Ind try

used as an abbreviation of manu-
factory, meant a workshop where
goods were produced by manual
labour in large quantity for sale. The
factory system of production also

passed through two stages. With the discovery of new lands and increased facilities of communication, the market for goods became wider still, and in some cases even international in scope. Hence arose the necessity of large scale production and quicker supply of goods which was not possible if the craftsmen were allowed to work independently, at their pleasure, and without any guidance, in their own homes. The merchant or entrepreneur, therefore, thought it necessary and convenient to start his own workshop and to make the craftsmen come and work there. He supplied both the raw materials and tools and employed hundreds of craftsmen as mere labourers on the Wage System as we know it to-day. The loss of their independence that began in the previous stage was thus complete. The entrepreneur who first appeared as the middleman between the producer and the customer now became the central figure in the industrial organization. He started the firm, engaged and controlled a large army of workmen, provided them with capital in the form of raw materials and tools, fixed the

prices of the goods and arranged for their sale. He became the organizer and risk-taker. As industry for the first time assumed an organized form under the leadership of the entrepreneur this stage is also known as that of Organized Industry. Again, as production was carried on in the workshop on a large scale by manual labour the workshop came to be known as the manufactory (*L.manus* means. the hand) or hand-factory, which was abbreviated into 'factory'. Hence the present stage of production is designated also as the Factory Stage.

Then came the later and modern phase of the factory system. It is the product of the Industrial Revolution that began in England towards 1760. This Revolution that brought about a complete change in industrial methods and organization, resulted from a series of mechanical inventions, and from the improvement of communication and extension of the market by steamships, railways and the postal and telegraphic system. The economic unit henceforth became the nation and at present the whole world may be said to constitute an economic unit for most purposes. The market is now national or international in scope and large quantities of goods to meet a vast demand could be easily and quickly produced with the help of power-driven machinery. Hence the ordinary

workshop or anufactory gave place to the modern factory which, as the Belgian economist Vandervelde suggests, should be called "machino-factory" as opposed to the manufactory. Engagement of a vast number of workmen, buying expensive machines, erecting costly mills and factories, and procuring huge quantity of raw materials, are beyond the capacity of men of small means and capital. As the factory system of production requires enormous capital it is called the Capitalist System. It may here be noted that the terms 'manufacture' and 'factory' have now undergone a change in meanings. Manufacture now means the production of goods on a large scale by *mechanical* labour, and factory now means a workshop where power-driven machinery manufactures goods of "standard" size, that is, goods of uniform size and pattern to satisfy large general demand. It should not be supposed, however, that with the growth of the factory, the household industry, the domestic industry and the workshop system have vanished. They have simply receded to the back ground yielding the prominent position to the factory.

In the modern factory the works have been divided into a large number of simple operations done often with the help of delicate machines invented for each of them. The workmen have been classified into distinct groups according to their skill, and under a

scientific system of division of labour each group now performs only one operation and that every day. The chief features, therefore, that characterize the modern factory system, are division of labour, use of power machinery and large scale production. Another feature that has developed is the tendency of the firms of the same industry to be localized at a particular place or territory. Each of these features have advantages and disadvantages of their own and the merits and faults of the factory system have all followed from them.

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CHAPTER VII

BUSINESS ORGANIZATION

Division of Labour and Machinery

1. We have seen in the previous chapter the special features of the modern factory system of production. We shall study them one by one in this chapter and shall begin with Division of Labour.

(In the primitive stages of economic life each individual not only produced all the goods he required, but also performed all the different processes of a work, himself. But with the increasing needs and growing volume of production some sort of division of work was found necessary. The first 'division of work' took place, as under the family economy, on the basis of sex, the males doing agricultural works outdoors, producing the domestic goods, and fighting the wars, and the women doing the cooking and spinning, feeding the cattle, looking after the children and the sick in the family. Such a division of work continued right to the end of the agricultural stage. The next step in the differentiation of work began under the handi-craft system, when.

Development
and meaning
of Division of
Labour

men took to distinct lines of production according to their individual inclination or social regulation. Thus arose the different trades or occupations in society ; for example, weaving, carpentry, smithy, pottery, shoe-making, etc. Subsequently, with the widening of the market and the need for larger scale of production, an industry became broken up into its divergent branches. The weaving industry, for example, was broken up into carding, ginning, spinning, weaving and dying, each becoming a separate craft by itself.)

(But it is in the factory stage of production that the technical division of labour really appears. In a modern factory the works have been subdivided into one thousand and one operations, workers have been classified into innumerable grades and each worker, or group of workers, now performs one operation only and always the same. The making of a fine watch, it is said, has been divided into 1088 operations, each done by distinct sets of workmen using distinct machines for each operation. It is the simplification of operations and performance of each of them always by a distinct labourer, or a group of labourers, that is now technically called Division of Labour.)

2. Division of labour is called Simple when a single task too heavy for one man alone is

done collectively by a number of workmen, as in the case of lifting a heavy load, hoisting the sails of a ship, etc. It is said to be Complex when several workmen, or groups of them, produce a commodity, by each doing a part of it, as in the case of manufacturing a watch.

The principle of division of labour is followed not simply among workmen but also among regions or countries, and is then called Geographical or Territorial Division of Labour. The nations, following this principle, specialise themselves in particular lines of production, each producing such goods only in which it enjoys special advantages. This is International Division of Labour. England, for example, produces coal and cotton goods, France produces perfumery and other objects of luxury, Brazil produces coffee, Australia wool and India jute. When, however, such specialisation in industries takes place among different districts of the same country or different parts of the same district or town, it is called Localisation of Industry, as we have the jute industry in Bengal, the cotton industry in Bombay and so on. It may here be noted that geographical division of labour is really specialisation in industries and not in particular processes of work.

3. Division of labour, technically so called, is the product of the Industrial Revolution and is a special feature of the factory system. Its scope depends upon the extent of the market, the scale of production and upon the continuity of work. When a commodity commands a large market it affords scope for production on a large scale. The works can be broken up into a large number of simple operations to be performed by distinct sets of workmen. Secondly, if the work is not continuous but intermittent, workmen who cannot be kept idle in the interval, must be given some other works to do, and so specialisation in particular processes of work is not possible. It is why agriculture, where the works are dependent upon the conditions of the weather and so intermittent, does not afford much scope for division of labour. The conditions favourable to it are largely to be found in manufacturing and transport industries where alone division of labour has been developed to its perfection.

4. Let us now see in what way (division of labour) has affected production and the workmen. The following advantages are claimed in favour of it. It (secures economy of time and it does

Advantages
of Division
of Labour

so in two ways. The modern factory worker who has to learn one simple process only learns it quickly and finishes his period of apprenticeship in a very short time. If a workman has to perform several operations, each requiring special tools and machinery, much time is wasted in passing from one operation to another. Division of labour saves this time as well. It also increases the skill of the workman, because continuous practice at the same work every day develops his skill to perfection. Under division of labour, labour-power in a business firm is fully utilized: as the works are adapted to individual capacity suitable work can be found for all, for the old and the young, for women and children, for the intelligent, the dull and the stupid. Each piece of work is, therefore, made efficiently; for the intelligent and skilful men are not wasted on works which can very well be done by unskilful workers, nor any unskilful man need be engaged to doing a work for which he lacks the requisite capacity. Division of labour leads also to better utilization of capital. As each workman is engaged to one operation only, every tool or machinery in the firm can be kept continuously employed; but if he does several works then while he is engaged with one of the tools, the others will naturally keep idle. Further, as the processes are simplified it becomes easier for the workmen to see

just where improvements are possible. Division of labour, therefore, facilitates inventions and improvements. Another advantage, which is, however, of a doubtful character for workmen, is that when operations are extremely simplified, they are invariably taken over by machinery. It saves labour and is, of course, an advantage to the producer, though its immediate consequence may be the displacement of labour. Finally, it may be concluded that all the above advantages combine to make production efficient and to lower the cost of production and prices to the benefit of the community as a whole.

5. (Division of labour, however, is not without certain disadvantages which affect mostly the life ^{de} and work of the labourers. For ^{ex}

Disadvantages
of Division of
Labour

example, it has increased the risks of unemployment in several ways.

The operations, having been simplified, can now be taken over by machinery, women and children, which naturally leads to the unemployment of men workers. Again, specialisation in one operation only makes a workman in pable of any other. If, therefore, he loses his job he fails to secure another employment which requires a different skill. He may get employment after a time but the interval may be too long for a poor man who has perhaps neither the time nor the means for acquiring a new skill. Moreover, division

of labour which means excessive dependence of one group upon another leads to the unemployment of all other groups of workmen while any one group goes on strike.

(Secondly, the workman's part in the finished product is but little, and so he cannot feel any pride in it. A man feels a pride and a joy when he makes a whole watch himself, but what pride can he feel when he does nothing else but fixing the face-glass of the watch? Lastly, performance of the same operation every day is not only uninteresting but monotonous and uneducative. It cramps the intellect, narrows one's interests and outlook, and robs one of all artistic sense.)

It may, however, be noted that division of labour and machinery go together. It will be found in section 7 how the evil tendencies of both have been sought to be mitigated and removed by certain measures in recent years.

Another characteristic of the factory system is the use of mechanical labour in production. (The effects of machinery may broadly be classified as those on production and on the life and work of the labourers.

Effects of machinery on production. Its effect on production has on the whole been to make it very efficient. It has given much relief to human muscles and brain by taking

over the heaviest as well as the most delicate tasks from man, and it does a work far more accurately and quickly than manual labour. A part of a machine when damaged may be exactly replaced by another at the cheapest cost, for the parts themselves are all manufactured alike by machinery itself. Again, in production of goods of a highly artistic character, manual labour, no doubt, plays a superior part, but even there much of the preliminary work of the artist, such as, supplying the necessary materials, tools and instruments, can be more quickly and accurately done by machinery, affording the artist, thereby much time and leisure to produce better, and more, works of art. Lastly, machinery has led to large scale production which, through its great economies, lowers the costs and prices.)

(But it is with regard to the effects of machinery on the life and work of the labourers that difference of opinion prevails.

Effects of machinery—on the life of workmen Machinery is said to have benefitted the labourers in several ways. It has, by reducing the strain on their muscles and brain enabled them to think and exercise their intellect as they work on, and to make improvements upon the old machines and to invent new ones. It may at first appear that as machinery

saves labour it causes unemployment; but on the other hand, it has increased employments directly by developing industries to produce machinery, and indirectly by developing certain industries which, in the absence of it, would not be started at all. Further, as in many cases the machines used in one industry are similar in character to those used in other industries, machinery has broken "the barrier between trade and trade" and has thereby decreased risks of unemployment. Lastly, it has made the workmen more methodical, smart, intelligent and punctual.

7. As against these advantages (it is contended that machinery, except in the case of very heavy works, has done but little to reduce the strain for the majority of workmen, who have to work very intensely under great tension in the din and bustle of the factory. It has, along with division of labour, narrowed their mind and intellect, and has reduced them into human machines, having no will or initiative of their own. The machine playing the superior role has deprived them of much of the pride of creation. Indirectly, again, machinery is responsible for many evils that followed in the train of the factory system. It has increased the number of accidents and loss of lives and limbs. The factory has been followed

by over-crowding in the cities and towns and consequent increase of mortality. The workmen, working in the dusty, smoky and insanitary factories and living in overcrowded rooms, where all rules of health and decency are ignored, have suffered both physical and moral degeneration.)

(It seems true indeed that machinery and division of labour have a tendency to create a floating group of the unemployed in society, for though increased employments will absorb many of the displaced workmen, the process of absorption however proceeds slowly, and while one batch is absorbed another batch comes in to preserve the army of the unemployed. That they also have the tendency to narrow the mind and intellect of the labourers seems also to be true. It must be noted, however, that thanks to certain modern improvements some of the evils are gradually being removed: the Factory Acts are enforcing rules of sanitation in the factories and in the housing of workmen, and are trying to reduce the strain and to mitigate the narrowing effects, by fixing a legal limit to the hours of work in order to afford them leisure and opportunity for physical, social and intellectual recreation, so that they may develop varied interests and wider outlook.)

(It is perhaps safe to conclude that in spite of all the condemnation of machinery by moral philosophers like Ruskin and Gandhi, the common-sense of the world will not go back to the pre-machine days; for it must be admitted on all hands that machinery has saved man from some of the most degrading and difficult works and has enabled him to utilize certain resources which, but for machinery, would have been ignored even to the present day. May be, the wave of mechanical inventions will subside, and society will settle itself down to a new equilibrium when most of the evil effects of machinery will be things of the past.)

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Marshall—Economics of Industry, BK. IV. XII. 1—2.

Gide—Principles of Political Economy (Veditz) Bk. II, Pt. I (ii) and Pt. II (iii).

CHAPTER VIII.

BUSINESS ORGANIZATION—*Contd.*

Localization of Industry

1. (The principle of specialisation) as we have seen (is) also (followed among different countries as well as among different localities in the same country. This is the natural outcome of the development of the means of communication. When countries and districts remain isolated, exchange is not possible between them, and so each is compelled to produce by itself all the goods that it requires, even though some of them may have to be produced at a heavy cost. But with the development of communication they find it economically profitable to give up their economic independence and to utilize their labour and capital in the production of such goods only in which each of them enjoys some special advantage, and then to procure other goods by mutual exchange. This explains the development of international division of labour and localization of industries. What industries a country should specialise in depends upon the nature of its soil and climate, its special crops and minerals and also upon the special aptitude of its population)

(Localization of industries, as we have known, refers to the specialisation of different parts of the same country in particular lines of production. It depends upon certain favourable factors, some of which are natural or physical, while others are economic and political.)

Causes of
Localization
of Industry

(Climate exerts a great influence in determining the place suitable for an industry. The dampness of the climate explains the localization of the cotton industry at Lancashire in England and at Bombay in India. The extractive industries, such as, mining, timber and fishing, and the agricultural industries, will, of course, be located in the neighbourhood of their supplies. This is why we notice iron and coal mining localized in Bengal and Behar, teak-wood industry in Burmah, fishing at the seaside localities, jute in Bengal and tea-gardens in Ass .)

(Apart from these physical causes certain economic factors also are responsible for the localization of industries in particular areas. The iron and steel industry, for example, is localized near about the source of the supply of its chief raw materials, iron and coal, as evidenced by the iron works in the vicinity of the coal fields in England and also in India. Availability of

labour and capital and accessibility to markets have led to the localization of various industries in the cities and towns and not in the rural areas where these economic advantages are either absent or inadequate. In the same city, again, industries seek such localities where other commercial advantages are available ; for example, banks are localized in such quarters where they can be easily and quickly reached by the commercial people, wholesale firms are located in such quarters where the transport facilities are best, and retail shops find their locale in the thickly populated parts of the town.)

(Certain areas, again, specialise in some industries and other areas of the country do not, or cannot, start such industries, not because the general conditions are unfavourable to the latter, but because the former areas have an advantage over them through the momentum of an earlier start. For, skill, reputation, transport facilities and other subsidiary industries to help the main industry, are already developed at the place which took the earlier start, but they are yet to be developed at other places which desire to compete with it.*)

(Some political forces also determine the locality of industries in a country. The kings chose particular places for their garrisons and courts where the nobles and princes also of the country

came and lived. Towns and cities thus grew up at such places; there was a large population which naturally encouraged expert artists and artistic craftsmen to come and start industries there. These industries flourished under the patronage of the nobility of the country, who sometimes even deliberately invited them from foreign lands, as the Plantagenet and Tudor kings of England invited Flemish and Huguenot artisans to come and settle in England, where they established many industries producing woollen and silk goods, lace, glass, paper, etc. In India also we find the indigenous industries still flourishing in the old cities of Delhi, Jeypore, Kashmere, Benares, Dacca, etc., where our kings and nobles once lived and even live to-day.)

3. (There are many advantages of such localisation. A place where a particular industry is localised acquires a reputation and so even an ill-organized firm there soon becomes successful. Advantages of Localization Sheffield cutlery, for example, is now famous all the world over and so the firms of Sheffield can have better trade connections than those of other places. Secondly, that place where a number of firms of the same industry are concentrated becomes a good market for the different kinds of skill required; because, having a large number

of firms to choose from and also because of the large scope for the employment of the members of their families, labourers are attracted to that place in large number. It is advantageous to workmen and producers alike; the former find no difficulty in finding their jobs and the latter also can be always sure of a regular supply of labour.)

(Moreover, as hundreds of skilful workmen live in the same locality, their children acquire a hereditary skill, owing to which their cost of training is lowered, and good workmen can be continuously secured from generation to generation. Another advantage that all the firms can enjoy is the growth in their vicinity of subsidiary industries to supply them with their raw materials, tools and machinery and also to organize their traffic. No railway or steamship company, for example, feels tempted to extend its service for the traffic of a single mill working at a place, but it will surely do so when fifty mills of the same industry are localized; a glass factory to supply phials and bottles may be established in the neighbourhood of a number of chemical factories. Lastly, frequent intercourse and exchange of ideas among producers and workmen create a good atmosphere for improvements and inventions.)

4. (Excessive specialisation of a locality may,

however, be attended with certain evils. The place fails to attract labourers, who prefer to go to places where there are a number of industries offering a variety of employments for themselves and their wives and children. In such places their own wages may be a little low but the total income of their families will be greater. Places which take to excessive specialisation cannot, therefore, attract the requisite supply of labour without offering high wages. Secondly, when the only industry of a locality is under depression the workmen are subjected to great sufferings!

(The remedy in both cases lies in having a number of other minor industries in the neighbourhood of the main industry so that the women and children may find employments to supplement the incomes of their families and the workmen dismissed in the main industry may also be temporarily absorbed by the other industries in the locality. But then the localization of an industry at a place is in fact generally followed by a number of subsidiary and supplementary industries.)

5. From the economy of localization we can very well understand that an industrial firm enjoys two kinds of economies—External and Internal. External economies are those common

advantages enjoyed by all the firms located at a particular place ; for example, ^{external} reputation of the place, banking ^{and internal} facilities, good commercial atmos- ^{Economies} sphere, etc. These economies are called external because they are not exclusively enjoyed by any one firm but are enjoyed by all of them in common. The internal economies of a firm are those that result from the skill in the organization and management of the firm and as such they are peculiar to each firm.

REFERENCE :—

Marshall—Economics of Industry, BK. IV. Chapters ix. 4, and x.

CHAPTER IX

BUSINESS ORGANIZATION—*Continued*

Scale of Production

1. Large scale production is, as we have seen in chapter vi, one of the special features of the factory system. (Before the Industrial Revolution the means of communication were neither safe nor easy, the markets for most of the commodities were local and production was by manual labour. Under such circumstances production was always on a small scale. But with the development of the means of communication the market became national and international in scope. Raw materials in huge quantity could easily be procured from within the country and from outside; the demand for goods also was wide owing to the extension of the market. The field of large scale production was thus created and the instrument for it was afforded by machinery. Thus wide market, large supply of raw materials and large scope for the use of machinery and continuity of operations are the conditions under which large scale production becomes possible and profitable.)

2. (Large scale production affords many advantages to the producers, the consumers, and the workmen, and so to the society as a whole.)

(As far as the producers are concerned the advantages can be classified as the economies of

<u>Advantages of large scale production</u>	<u>Productive Power and of Competitive Power.</u> The former result, as we shall see, from the larger scope for division of labour, greater
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economy of machinery, raw materials and space. A large producer, for example, can employ different kinds of labour according to the skill necessary for the various operations of his vast business and reap all the advantages of division of labour. He can secure the services of very able and talented men to manage and superintend the various departments of his firm, and can himself devote his whole attention to the policy and larger problems of his business. Secondly, he can buy the most efficient and up-to-date machines, however expensive, and can keep them continuously employed. He can have his own carpenters and mechanics and save the loss of time and cost of repair when any machine is damaged; moreover, he can economise his coal and other fuel used as motive power.

(A large scale producer can also make a better use of his waste materials. A small scale producer has often to throw away a number of small things,

which are, however, collected by a large producer and utilized for producing many other goods, called by-products. He can also purchase his raw materials more cheaply and transport his materials and products at less proportionate cost because he buys and transports them in a large quantity. Moreover, he has to pay a smaller rent relatively to the size of his business because he need not increase his space proportionately to the increase of the scale of production.)

(Then there are the economies of greater competitive power. A large producer can make more economical advertising and canvassing. Each commodity of his advertises others he produces, each agent of his can canvass for all the variety of his products. The proportionate cost of his advertising and canvassing is, therefore, far less than that of the small producer. Moreover, a large producer can get better credit facilities from banks and other persons he deals with, and he can also satisfy the whims of his customers by a large variety and stock of goods.)

(All these economies make for lower cost of production and cheapening of goods, to the advantage of the producers, the consumers and the wage-earners.)

3. (But large scale production under conditions of absolute economic freedom leads to certain

deplorable economic, social and political results.

A large scale producer destroys the trade of his smaller competitors not unoften with unfair means. He has robbed the ordinary craftsmen of their occupations and has turned them into mere workmen. He can in exceptional cases control the wages and prices to the detriment of the labourers and consumers in general. Wealth, under such circumstances, tends to concentrate into the hands of a few rich capitalist employers and society becomes divided into two broad classes—the employers and the employees—with conflicting interests. Secondly, these economic evils ultimately produce unhappy social effects. Loss of independence on the part of so many men in society means loss of character, of independence of mind and thought. It robs a man of his initiative in action and of the spirit of self-reliance. Wage-slavery creates unhappy discontented workmen, and leads ultimately to industrial disputes, strikes and lock-outs and even to political revolutions)

(It goes without saying, however, that the economies of large scale production are great and the evils spoken of just warn the society about the necessity of some sort of social regulations and adjustment of relations between the employers and the employees)

4. (Owing to the many external and internal economies of large scale production there is generally a tendency to decreasing

Limits to the
size of a firm

cost, that is, increasing returns to the labour and capital. It would therefore seem that a manufacturing firm can go on expanding indefinitely. But in the actual business world it is found that however large a firm may grow, it ultimately reaches a point beyond which further expansion is either not possible, or possible only at greater and greater cost per unit of output. In other words, diminishing return sets in after it expands beyond its economic size under any given conditions. There is, therefore, a limit to the scale of production in business firms and it is due to the following economic causes.

The organizer's capacity is after all limited, and as his firm grows in size and complexity, efficient management thereof becomes a difficult business for him. The limited demand for his products also puts a limit to the amount that he should produce. Thirdly, again, the demand for a commodity fluctuates with the change of fashions and tastes and the introduction of substitutes in the market. Moreover, the scale of production will be limited by the supply of the necessary raw materials and other requisites of the firm.

All these are the limiting factors of the scale of production and the size of a firm. It is why Chapman says that in any given conditions, there is in every industry, a typical or "normal magnitude" of a firm which secures for the owner maximum economy and profits. Further growth beyond this normal size will be at the cost of economy and so the profits will not increase in proportion to the increased outlay.)

5. (One curious fact in these days of large scale production is that small scale production has managed to exist side by side, Conditions favourable to small scale production with little chance of being driven out of the field. It is, therefore, interesting to study the causes and conditions of its existence, in some cases, even in the teeth of all competition from large scale production. On a closer study of the situation it will be found that there are some kinds of production where the large scale and the small scale producers do not compete, there are others where they cooperate, and there are some industries, again, in which they stand in a competitive relation.)

(Highly artistic and richly ornamented goods require great personal care, judgment and skill of the artist. In these cases, machinery may be used

for the preliminary processes and materials, but it is the manual dexterity which plays the supreme part in them, and as such they will ever remain within the province of small scale production. Similar is the case of those industries that produce goods, which satisfy purely local demand, or are made to order to satisfy the personal tastes and requirements of local customers.)

(Some of the small industries, again, are only subsidiary to a large industry, and supply certain materials or services which the latter does not consider it worth while to produce. There is yet a third group of small scale producers who simply do a small process of the work, or give a finishing touch to the work of a large industry ; for example, there are many Swiss workers who do not work in any factory but work at home and produce the various parts and materials required by the watch industry. The body of the Kashmere 'Shawl' is made in a large mill but the artistic work upon it is done by the cottage workers.)

(But in the competitive grounds also small scale producers have managed to survive owing to some favourable circumstances. Firstly, the small producer works with greater zeal and care ; his eyes are upon everything in his business, and thereby he avoids all waste of materials and shirking of duty by workmen, and also all cost of

a complicated system of checks and counterchecks. Moreover, he is in personal touch with his customers and can avoid all losses of miscalculation and all costs of canvassing and advertising. In some cases, his love of independence and low standard of living enable him to keep satisfied with low profits and small income.)

(Certain modern developments again have infused a new life and vigour among the small producers. They have been immensely benefited by the cheapening of machinery and power. The great co-operative movement also has enabled them to solve the difficulties of procuring cheap loans, of buying their materials and selling their products through co-operative credit, purchase and sale societies. Moreover, diffusion of general and technical education has made trade knowledge and scientific skill a common property of the producers, large and small. All these factors explain how small scale production, in spite of the great economies of large scale production, has managed to exist to-day and to pull on satisfactorily even in the competitive fields of production. It must, however, be admitted that the small producer has lost the front rank of the field which has been captured perhaps for ever by his stronger rival.)

6. (In order that a commodity may be produced on a large scale, it is obvious that it must command

a large demand and wide market, for which it must, of course, be of a durable character so as to bear long transportation. Moreover, it must be capable of being produced continuously under a routine method with the help of machinery and division of labour. These conditions, however, do not obtain to any considerable extent in agriculture. Some of the agricultural products are very touchy and delicate and so require a great personal care and attention of the farmer which is not possible if the operations be spread over a large area ; nor do most vegetables last long enough to bear long transportation. Moreover, if the operations be extended over a wide region, supervision of workmen becomes difficult and the nature of the soil also may not be uniform to allow a single crop to be raised. Further, agricultural operations are seasonal and depend on weather conditions, every season, every day, and almost every hour, having a special work of its own, when no other work is possible. It is why continuity of operations cannot be maintained, nor is there much scope for specialised machinery and division of labour. All these causes militate against large scale production in agriculture)

(Yet there are some staple crops, such as, wheat, rice, tea, which are fairly durable and require no constant care and supervision. These crops may be

raised under large scale farming and many economies of large scale operations can be reaped by the farmer. He may raise farm buildings, use machinery for ploughing, harrowing, sowing, reaping and thrashing; he may use expensive manure, make experiments on soil and seeds, keep a part of his farm fallow for a season or two; he can arrange for drainage and irrigation and also for cheap marketing.)

7. Agricultural farms, as we have just seen, cannot, because of the very nature of their operations, be of a very large size as manufacturing firms can be. But. **Economic size of agricultural farms** if they be of a very small size, economic agriculture becomes difficult. The size of the farms must be large enough to enable the farmers to earn enough income so that they may take advantage of the scientific processes of agriculture.

In India, the Hindu and the Moslem laws of inheritance favouring distribution of a man's property to a large number of heirs have led to subdivision and fragmentation of holdings, owing to which Indian holdings are generally of a tiny size. The result is that Indian peasants cannot earn enough income to enable themselves to adopt the scientific methods of agriculture. They cannot procure cheap loans and are generally in the grip of rapacious moneylenders who charge exorbitant rates of

interest. They cannot arrange for proper drainage and irrigation nor can they buy good seeds and manure. Their marketing difficulties also force them often to sell their crops in the rural market at unfavourable prices. All this is due to the pettiness of the holdings. Agricultural farms should, therefore, be of a fairly large size if full economy is to be realized.

But there are certain cases where small farms have special advantages and other cases where they can work with advantage. For example, in market gardening, farms must, as a matter of course, be small, for in such a system of agriculture producing fruits, flowers, and expensive vegetables and crops, very delicate handling and special care are necessary which the farmer cannot bestow if the farm be very large. In such cases the farmer can profitably adopt the intensive system and concentrate his labour, capital and attention upon a small farm. In ordinary agricultural production also one advantage of the small farmer is that he generally works with far greater zeal and industry than the labourers of a large farmer. But the most important factor which has enabled the small farms to work efficiently is the progress of co-operation. Difficulties of procuring cheap loans, of buying seeds, cattle, manure and machinery and of

marketing the products can now be avoided through the cooperative credit, purchase and sale societies. Thus it would seem that with the growth of population and increased demand for crops, both ordinary and special, highly intensive farming will be necessary, and farms will have the tendency to grow small in countries where large farming is the rule. Of course, scientific progress of agriculture will always depend on the initiative of large farmers.

Large scale production has made the greatest progress in transport industries, manufacture, banking and in mining as well. In retail trade small scale is the rule, although large establishments are trying to replace the smaller shops by means of their varied stocks and their economies of buying, marketing and advertising. In agriculture as we have seen, large scale operations have made but little progress except in the case of some staple products, like wheat, rice, tea, etc.

Recent years show some interesting developments of large scale production. There are tendencies now for two sorts of combination—Vertical and Horizontal—among firms and industries. In the case of a vertical combination, called “Integration of Industries,” a

main industry absorbs a number of subsidiary industries; for example, a weaving mill may have its own spinning and ginning mills; an iron and steel works may have its own coal and iron mines, its own transport and lighting arrangements. In the case of a horizontal combination, a number of firms all engaged in the same industry may combine and form either a Trust or a Kartel. Under a trust they combine to form a single organization, with a central office. They work under the directions of the central organization, but the internal management of each firm is left to itself. The motive behind the trust movement is to secure the advantages of large scale production, to avoid the wastes of competition and to enjoy the advantages of a virtual monopoly. In the United States there is quite a good number of strongly organized trusts; for example, the Standard Oil Company, the Sugar Trust, the Steel Trust, etc. The Kartels, are looser organizations of independent firms formed for one or two specific purposes, such as, the apportionment of the market, fixing the prices, etc. They are easily formed and are as easily broken up. To seek their analogy in politics, we may say that the trust is an industrial federation and the kartel is an industrial confederation.

Marshall—Economics of Industry, BK. IV. xi.

Chapman—Outlines of Political Economy, Chap. XIII.

undertakings and their comparative advantages and disadvantages.

The organizer, before undertaking a business, has to decide whether he should start it hi elf

**Forms of
Business
Units**

at his own initiative and risk,

or take some one else as a partner to share the full risk with him.

If, again, the risk is very great he may invite the general public to invest their capital and take the risk collectively. In some cases, again, the workmen, unwilling to serve under a capitalist employer, may decide to start a cooperative business where they are their own employers as well as labourers. There may, therefore, be four chief types of business firms, which may be distinguished as Individual Entrepreneurship, Partnership, Joint-Stock Company and Cooperative Society.

2. In the case of Individual Entrepreneurship the enterpriser supplies his own capital or borrows

**Individual
ntrepre-
neurship**

it from others, organizes the

business himself and takes the whole risk upon his own shoulders,

sharing the profits and losses with

none else. Such a form is suitable for small undertakings requiring small capital and involving small risk. The merit of this form of business lies in the fact that the entrepreneur taking the whole

risk upon himself keeps his eyes upon everything, works with zeal and avoids all possible waste. But it has certain serious disadvantages. No big enterprises, requiring large capital and involving great risk, can be undertaken in this form, because the loss, if any, may be too heavy for one person to bear. Moreover, as they are purely personal enterprises, they are of an unstable character, almost invariably closing down at the bankruptcy, or death, of the owner.

3. In a partnership, two or three persons pool their capital, organize the business together and share the profits and losses according to the terms of their contract.

Partnership

The most important feature of a partnership is that the partners take unlimited liability on themselves, being responsible for the liabilities of their business up to the last farthing of their possessions. If it runs into debt and the debt is not repaid, the creditor may catch hold of any one of the partners, redeem the whole claim from him, leaving him to seek relief against his partners in the court. The other characteristics are that the partners cannot transfer their shares to anybody else, nor take in a new partner without unanimous consent; the death or withdrawal of a partner is followed by the dissolution of the partnership.

Such a form is suitable for undertakings requiring a fairly large capital and involving a considerable risk. But the disadvantage lies in the unlimited liability of the partners; difficulty of withdrawal without dissolving the partnership, and the risk of dissolution at any moment. Large enterprises are scarcely possible in this form, nor can a stable business be organized as a partnership.

4. The Industrial Revolution, as we have seen, introduced the factory system. Big mills and factories required enormous capital. Not only that it was very often beyond the means of one or two persons but it also involved a very great risk. Hence a new form of business was devised. It is now known as Joint-Stock Company.

One or a few persons first decide to undertake enterprise. Some influential persons and financiers are approached so that they might lend their help and patronage. Then they decide what amount of capital should be invested, form a Board of Directors, appoint a General Manager and settle other preliminary matters, after which they get the company registered under the law of the country. Then they invite the public for buying shares of the company.

The necessary capital is raised by selling

shares and debentures. The shares may be of various denominations, say, of Rs. 10, Rs. 50, Rs. 100 and so on, and these may be, again, ordinary or preferred shares. The holders of preferred shares have the first claim to the dividends at fixed rates. There may be first preferred shares, second preferred shares, etc., of 5 per cent. or 6 per cent. and so on. After these claims have been met, the rest of the dividends is distributed to the ordinary shareholders. The shares of larger denominations are sometimes called stocks. Stocks are registered, of larger denominations, and can be sold in multiples; but shares are mere bearer certificates, of small denominations, and cannot be sold in multiples. Apart from these ordinary and preferred stocks and shares, some stocks and shares are kept reserved for the directors of the company and these are called 'deferred' shares.

When the shares are purchased by shareholders, they are said to be subscribed, but at first only a part of the subscribed value is paid, the rest being paid by instalments. The amount of subscribed capital actually paid is called paid-up capital. When more capital is needed but fresh shares cannot be sold, the company may raise loans from the public, and the loans too are divided into shares which are called bonds or debentures.

The bond or debenture holders are the creditors of the company, and as such they get only the interest on their loans; but the shareholders are the owners of the company and as such they get the profits, or bear the losses, if any.

5. The following are the chief features of a joint-stock company. It is vested with a legal personality and can be sued in its own name. The shareholders have only a limited liability for the business; that is to say, if anything goes amiss a shareholder loses only his share amounts in the company and nothing more. The owners of the business are the shareholders but they are more like sleeping partners leaving the actual management of it to a group of shareholders called Directors. A shareholder can sell his shares to others, or he may even die, but the company is not dissolved thereby.

The advantages of such a form of business are many. The fact that the existence of a joint stock company is not affected by the transfer of shares, or by the death of any shareholder, makes it more stable in character than an individual entrepreneurship or a partnership.

Advantages of
the joint-stock
system

It is why no industrial enterprise, that proceeds slowly towards success and is to run for generations, can be started except in this form. The principle of limited liability and small individual risk, varieties of shares, stocks and debentures, and easy transferability of the shares, have encouraged even the smallest men to invest their capital in such enterprises. It has induced more saving, tempted wealth out of the hoard, increased the total capital power of the community and thereby its industrial activities. Further, a joint-stock company can select from its large number of shareholders the right type of men for the Directorate, and can, with its large funds, command the services of very able managers, supervisors and foremen. Joint-stock companies, therefore, open up opportunities for ability, and increase the number of skilful entrepreneurs and managers. Moreover, big enterprises as they are, they can reap the advantages of division of labour, machinery and large scale production and can produce goods efficiently and cheaply.

7. The joint-stock principle has, however, certain faults of its own. The directors after all have but little at stake : they have the command over capital not their own, and this, together with the limited liability of the share-

Faults of the
joint-stock
principle

holders, often makes them reckless and unscrupulous in the use of the capital. The sense of mutual support also is rather weak in such enterprises. The shareholders are mostly strangers to themselves. Whenever the business runs badly, the shrewd and intelligent among them sell out their shares leaving the company to the unintelligent shareholders. Worse still, the directors are always in the know of things, and when from a bad state the prospects of the business brighten up towards brilliant success in the future, the directors make a show of selling their shares out to induce the ordinary shareholders to sell out their own, by arousing in their mind a suspicion that the affairs of the business must be going wrong and might turn worse still in the near future. In this way the 'inside managers' can swindle the unsuspecting shareholders by buying up their shares secretly through agents.

The above faults are, however, not very serious, for with the spread of education and diffusion of knowledge they tend to vanish. In modern industry, organized on the joint-stock principle, shows most clearly an unhappy feature of modern capitalism. The owners of a joint-stock company are the shareholders who are more like sleeping partners, spread over wide regions, and mostly strangers to one another. The policy of the business is

left to the Directors, and the actual management is in the hands of a salaried manager, who looks more to the interests of the company than to those of the workmen. The labourers are in direct touch with the supervisors only, who are, however, mere employees like themselves. The ties of affection and sympathy, that generally kept the master craftsman and his apprentices together, have given place to a cold and distant relation between the modern employer and his employees. The workmen are the servants not of this man or that, but of Capital, an unseen force that has made of them mere playthings, to be called in, and thrown off, whenever it suits its purpose. Devoid of all sentiment, it has ignored the human element in the workmen. The natural role of capital is as an *aid* to labour, but it has now assumed the unnatural role of a tyrannical *master*, which the workmen protest against, and resent even by violent means like strikes and threats of a political revolution. The conflict of interest that has grown up between the employers and the employees is economically harmful to the nation; and it can vanish only when capitalistic production accords a voice to labour in its management and organization.

But it is just that to which the employers cannot reconcile themselves, for they would say

that unless the labourers be prepared to share the losses along with the employers they cannot be entitled to have a voice in the management of the business.

Dissatisfied with certain half-hearted measures adopted to improve their position the workmen have at length devised a new form of business organization where they are their own masters. This is known as Productive Cooperation. A number of workmen subscribe the initial capital and borrow any capital needed and start the business. They have their committee of management which makes the appointments and fixes the wages. As workmen they receive the wages as fixed by their committee, and as owners of the business they take the risk and share the profits and losses. This principle of cooperation has been tried in other lines as well; for example, in consumption, credit, sale and purchase. Thus we have now-a-days Cooperative Productive Societies, Cooperative Stores for Consumption, Cooperative Credit, Sale and also Purchase Societies. Cooperation has, however, attained the greatest success in consumption, credit, sale and purchase; but in production it has attained the least success. The jealousy of workmen among themselves, the desire of expert men to set up independent business, the

tempting salaries offered to them by the capitalist firms, and the consequent failure of cooperative societies to retain the services of very able managers and organizers, account for their failure and poor success. In fact coooperation cannot flourish by the side of capitalist firms. It is this knowledge, gathered through the meagre success of cooperation in production, that has led to the philosophy of Socialism. It proposes to destroy Capitalism by abolishing private ownership of land and the instruments of production as well as all private industries, and stands for state ownership and management of industries. - Socialism is now on its trial in Soviet Russia. Whether it will succeed is yet for the future to show.

REFERENCES :—

Ely—Outlines of Economics, Chap. X.

Marshall—Economics of Industry, BK. IV. XII.

CHAPTER X

MONOPOLY

1. Production of a certain commodity may be under two different conditions. When there is a number of rival producers all supplying the same commodity the business is said to be under competition. But when the supply of a commodity is controlled either mainly or exclusively by one, or a group of, persons, who thereby can exercise a full control over the price, the business is said to be a monopoly. A monopoly can, therefore, be best defined, in the words of Professor Ely, as "That substantial unity of action on the part of one or more persons engaged in some kind of business which gives exclusive control, more particularly although not solely, with respect to price". The essential test of a monopoly is that it must have an exclusive control over price. This control over price might be acquired either through a complete control over the whole supply or over a large part, say 80 or 90 per cent, of it. When the monopoly controls the whole supply it is a complete monopoly, otherwise it is a partial monopoly.

2. Monopolies may be classified in several ways from different stand-points. I. According to.

the area over which the monopolies extend, they may be Local, National and International. The supply of electric power, or of water, in a municipal area is a local monopoly, the copy right of a book having force within a country is a national monopoly, Bengal jute enjoys an international monopoly.

II. On the basis of the ownership of the monopolies, they may be classified as Private, Public and Quasi-Public. If a particular person or a private company enjoys the exclusive ownership of a business it is a private monopoly ; for example, the Calcutta Tramway and Electric Supply Companies. A state railway, municipal water supply, the Post Office etc., are examples of public monopolies where both the ownership and the management of the business lie with a public body. There are other monopolies which stand mid-way between the two. A public body, like the state, a municipality or a district board, may enjoy the ownership of a certain business, but the management may be in the hands of a private company ; for example, the Eastern Bengal Railway.

III. Again, according to a third classification, based upon the source from which the monopoly power is derived, monopolies may be Social and Natural. The former refer to those monopolies which arise out of exclusive privileges granted by some human authority. The state, for example, grants monopoly privileges like patents,

copy rights and trade marks. It also grants certain public consumption monopolies to private individuals with a view to check and regulate the consumption of certain drugs and liquors, like opium, wine, etc. Public authorities may also grant some fiscal monopolies with a view to deriving some revenues from the recipients of the privileges ; for example, the canal ferry service under the District Boards in Bengal. Under this class we may also place the exclusive privileges of some business granted to individuals by private persons or institutions.

Natural monopolies arise out of the natural limitation of the supply of raw materials at a particular place, like jute in Bengal, or out of some natural or inherent characteristics of the business concerned ; for example, the railway industry, the postal and telegraphic services, tramway industry, water and electricity supply in a municipality, etc. In these cases, scope for competition is limited and though it may continue for sometime yet monopoly is bound to be established ultimately for three reasons :—

Firstly, the scope for competition in these industries is limited by the fact that their fixed expenses form by far the greatest portion of their total expenses, the running expenses forming but a small portion of the total. Competition begins, cutting of prices follows only to stop shortly, for the

fixed expenses must be realized if the officers and employees, the rent and the interest charges are to be paid. The weaker firms soon die out leaving the field to a few strong ones. Further competition results in the elimination of all but the strongest one, or it may be that the few firms may choose to amalgamate ; and in either case a monopoly is established.

The second important reason is that a slight decrease in the rates charged by any one of the competing firms secures for it all the customs, while the rest of the firms get none. Lastly, there is the physical difficulty also for a number of firms to compete in these industries ; for example, a municipality cannot allow a number of companies to use the roads and streets for tramcar service or telephone and electric supply without making the life of the citizens intolerable. Even if it wishes to follow *laissez faire* policy, there is no room available in the streets for a number of competing firms. A number of railway companies cannot extend parallel lines for a good distance because there may be hills, river bends, private lands, etc., to intervene and to divert the competing lines wide apart in different directions.

These three inherent characteristics are responsible for the establishment of monopolies in the industries referred to, and as they result from the

very nature of the industries concerned. they are called natural onopolies.

REFERENCE—

Ely—Outlines of Economics, Chap, XIII

CHAPTER XII

THE LAWS OF PRODUCTION

1. We are now in a position to understand the Laws of Production with deeper insight.

The Law of Diminishing Return One of these is, as we have learnt, the Law of Diminishing Return (refer to pp. 84-92).

In the course of our discussion on its scope it was remarked that in manufacture, transport and commerce, man's skill and organization more than counter-balance the effects of this Law, and make for an increasing return to the increase of labour and capital. The deeper

The Law of Increasing Return reason that makes it possible is that increase of labour and capital is followed by large scale produc-

tion, division of labour, use of specialised machinery, improvement of machines and processes, which, together with the localization of industries, effect great economies, external and internal, and lead to efficient production and greater output per unit of labour and capital, of course, as long as the firms of the industries referred to do not exceed their normal size, and there is no dearth of any factor of production essentially required. These industries, therefore, are normally subject to the

Law of Increasing Return, which may be thus stated :—

“An increase of capital and labour leads generally to an improved organization, which increases the efficiency of the work of capital and labour.”

The tendency of Diminishing Return always presses against that of Increasing Return in every kind of production. But where

The law of
Constant
Return

the effects of the one are neutralized by those of the other we have the Law of Constant Return,

and an increase of output proportionate to the increase of labour and capital. This Law operates in those industries where the cost of the raw materials forms as important an element of the total expenses of production as the manufacturing cost, e. g., the production of flour, blankets, etc.

One important point to note in connection with the three Laws is that the Law of Diminishing Return leads to increasing cost, that of Increasing Return to decreasing cost, and the Law of Constant Return to constant cost, per unit of output from an increased application of labour and capital.

REFERENCES :—

- Marshall,—Economics of Industry, BK. IV. XIII. I.
Chapman—Outlines, Chap. XI.

EL MENT OF ECONOMIC

IV

EXCHANGE

CHAPTER I

INTRODUCTORY

1. In the modern economic world men have adopted the principle of division of labour according to which each man specializes himself in a particular line of production for which he possesses special skill and advantage and then exchanges his own products with those of others. The same principle of specialization in production, as we have seen, is followed among nations. The former has led to internal or home trade, and the latter to external, foreign, or international trade.

Exchange between individuals and nations has many economic advantages for them. It increases the productive capacities of individuals and of nations by enabling them to devote their time, thought, labour and capital, to such lines of production only for which they have special advantages and aptitude. This results in the largest return to the labour and capital power of the communities, which is not possible if labour and capital be dissipated by being distributed among all the possible industries to supply their needs. The policy of absolute economic independence is as much harmful to individual as to national economy. Secondly, exchange makes it possible for wealth, which would

Advantages
of Exchange

otherwise be wasted or remain unutilized, to be utilized, and thereby it enriches the individuals and nations; for example, in the absence of exchange, the rich products of a 's fruit gardens would be useless for him except, of course, a small part that would be consumed in his own family; similarly, without exchange New Castle would not be able to sell her coal, nor would California be able to sell her gold, nor India her jute. Moreover, increase of exchange leads to greater efficiency of productive organization, for with the development of exchange, markets are widened to be followed by large scale production, division of labour, use of machinery, inventions of new machines and improvements of the old, introduction of better processes of work, better communication and marketing facilities, all of which result in great economies that raise the level of a country's economic prosperity.

Whenever any exchange transaction is made there is always involved the question of exchange rates or prices. The region where buyers and sellers of a commodity compete for its purchase and sale is called a market. Another factor that comes in under exchange is the medium of exchange. When exchange first began in a society it was based on barter, that is, exchange

of goods for goods. At the system was for many reasons found inconvenient and was replaced by the monetary system. Again, merchants and manufacturers are always in need of money for purchasing their raw materials and machinery and for paying the wages and rent charges, far ahead of the sale of their products. They are not able to provide all the money they require for these purposes. Loanable capital lies dispersed in society, but producers cannot go from door to door in search of loans. Some institutions are necessary in society to mobilize the dispersed capital at the industrial towns and centres and to help the producers with ready capital. These institutions, called banks, have now become indispensable to an industrial country. Lastly, exchange of goods and services is not confined now-a-days within the limits of a country, but nations now depend upon one another for the supply of their needs. The exchange between nations is called international trade. Exchange, as a division of our science, is therefore concerned with the study of (i) market and prices, (ii) money and banking, (iii) and international trade and trade policy. In this elementary treatise we shall confine our study to market and prices, and the simple problems of money, leaving the rest for the next course of study.

CHAPTER II

MARKET

I. Two classic definitions of an economic market are those of Cournot and Jevons quoted by Marshall.* The two definitions bring out the two aspects of a market very clearly. Cournot looks at the regional extent over which the market functions and Jevons lays stress on the functions of a market, as will be evident from their definitions given below.

Cournot says, "Economists understand by the term *Market*, not any particular market-place in which things are bought and sold, but the whole of any region in which buyers and sellers are in such free intercourse with one another that the price of the same goods tend to equality easily and quickly." Ignoring the regional aspect of a market, Jevons would say, "Originally a market was a public place in a town where provisions and other objects were exposed for sale ; but the word has been generalized, so as to mean any body of persons who are in intimate business relations and carry on extensive transactions in any commodity

* Economics of Industry, BK. V. chap. I. 2 .

..... The central point of a market is the public exchange, mart or auction rooms, where the traders agree to meet and transact business. In London the Stock Market, the Corn Market, the Coal Market, the Sugar Market, and many others are distinctly localized;.....But this distinction of locality is not necessary. The traders may be spread over a whole town, or region of country, and yet make a market, if they are, by means of fairs, meetings, published price-lists, the post office or otherwise, in close communication with each other."

Thus what is popularly called a market is only a central place where buyers and sellers of a commodity agree to meet for the convenience of their business transactions. But a market really consists of the whole of any region where free intercourse and competition go on among the buyers and sellers, even though they never see each other. In fact Market may refer not to any region or locality at all, but a group of buyers and sellers and the competition that goes on among them for the purchase and sale of a commodity. When, for example, we say that the rice market is very dull, we really mean that the dealings in rice between buyers and sellers are but few.

The quicker and freer the intercourse and competition among the parties the greater is the

tendency for the price of the same commodity to be uniform at the same time in all parts of the market ; of course, allowance must be made for the transport charges. For, example, if the price of a certain quality of rice in Calcutta is higher than the price prevailing at Rangoon by more than the full transport charges from Rangoon to Calcutta and ultimately to their houses, the citizens of Calcutta will find it economical to buy from Rangoon. As a result of the increased demand for the Rangoon rice and the decreased demand for the Calcutta one, price at Rangoon will rise and that at Calcutta will fall, until the latter, added to the full costs of delivery to the consumers, is equal to the former. The better the communication and the freer the trade, the quicker will be the equalization of the two prices.

∴ Two things, therefore, that are essential to constitute a market are a commodity and competing groups of buyers and sellers ; and the essential test of a market is that the price of a commodity in one part of the market cannot remain different from the price prevailing in other parts of it for a long time.

2. The functional organization of markets has evolved through several stages. The first stage was that of a dispersed market, that is to say, buyers and sellers had not yet chosen to meet at any particular place for transacting their business

optional
evolution of
markets

but they sought each other. This was after all very inconvenient and troublesome, and so they agreed to meet at certain convenient places and transact business. This led to the localization of markets. As the scale and variety of transactions increased, it was found difficult to carry large quantities of goods to the market centres for sale and to bring back any portion that could not be disposed of, nor could the distant buyers come to the market place. This made the sellers adopt the method of showing, or sending, samples of goods to customers who could henceforth buy goods even from distant places if they were satisfied with the sample and price of the goods. The goods which were sampled naturally commanded a wider market and larger sale. But subsequently, even sampling was considered inconvenient and cumbrous, nor could all goods be sampled. This led to the development of the grading system. The various qualities of the same commodity were arranged in separate classes bearing a distinct name or mark; for example, Grade A, Grade B, and so on; or some distinct names and numbers of the different qualities of the commodity. A distant buyer could henceforth simply refer to the grades and compare the prices, and order for goods without actually seeing them or their samples. Gradable goods, therefore, could command a still wider market. Lastly, the original mixed markets, where all

sorts of firms existed together, soon led to the "differentiation" of markets ; that is, all the firms dealing similarly in the same commodities became localized at one place. Thus we have the Wholesale Market, the Retail Market, the Shoe Market, the Money Market, the Cloth Market, etc., each having a distinct locality in a city or town.

3. A market that is well organized is such that a slight change in the price of a commodity is immediately known to all the centres.

Character of
a well organiz-
ed market of the market and the disturbed
price is brought back to a
level of uniformity everywhere.

Gold, for example, has an international market. If its price falls low in London it will at once be known to the rest of the world, telegraphic purchases will be made from London by centres where high prices prevail. Thus London price of gold will rise up and the prices at other centres will fall till they become uniform at all centres, allowance being made for the transport charges, of course. Such a quick adjustment of price to a uniform level is possible only when there is freedom of trade and the means of communication and information also are highly developed by good transport facilities, like railways, steamships, etc., posts, telegraph and telephone, published price-lists and news papers.

The greater the development of these factors-

the more will be the efficiency of the market, and the price of a commodity cannot remain different at different centres for a good length of time.

4. Certain commodities have developed highly organized markets through what is called Exchange Markets. Stocks and shares of government loans, of old and newly floated joint-stock companies, gold, silver, iron, coal, wheat, cotton, wool, jute, tea, and other highly gradable things are now changing hands quickly and easily through the Exchange Market which has got two branches; namely, the Stock Exchange and the Produce Exchange.

The Stock Exchange is the market for capital. As Todd says, "The primary function of the Stock Exchange is to create a market for capital, to find capital for the formation of new companies, to buy and sell stocks and shares of existing companies and to float and deal in government loans and stocks."* In the Produce Exchange, commodities which can be graded, for example, gold, cotton, wheat, wool, etc., are exchanged. They are graded by certain names well known to the dealers and the prices of different grades are also fixed. They might be sold

* Mechanism of Exchange, Chap. III.

either for immediate delivery, called 'Spot' sales, or they might be in distant lands and not yet in the hands of the seller and yet the sale might take place in the form 'futures', that is, contract far ahead, which may be either for actual requirements of the purchaser or for "profiteering on differences" between the present purchase price and the future sale price. The parties in the Exchange Market are the brokers who alone are the members of the Market. The outsiders have to approach the Market through these brokers.

5. { Both in the Stock and Produce Exchange, a peculiar kind of business has grown up known as Speculation, that is, buying and Speculation selling shares and goods with the mere object of selling or buying them up again at a profit. This is what is known as "speculating on differences", which involves two kinds of transactions: (1) the speculator may buy shares or goods, which he really does not wish to keep and perhaps cannot even pay for, in the hope of selling them again at a profit; (2) or he may sell shares or goods, which he may not actually possess, with a view to buying in again at a lower price. The former transaction is known as "bull" transaction, because it tosses up the price as a bull tosses up its victims with the horns; and the latter is called a "bear" transaction,

because it lowers the price downwards as a bear tears the flesh of its victims downwards with its claws.)

6. Speculation was not a little condemned at its first inception. But gradually its advantages
me to be appreciated and at

**Advantages
and evils of
Speculation** present speculation in the Produce
Exchange at least is regarded as
indispensable to the factory system
of production that involves production in anticipation of demand and price.)

(Speculation may be healthy or unhealthy according as the speculators are honest and well trained for their business, or inexperienced and dishonestly selfish in their dealings. Healthy speculation not only benefits the speculators but also the society, because it really prevents violent rise or fall of the price and makes it steadier. When, for example, expert speculators think that the price is going to rise one month hence they buy at once a large stock of goods, which they cannot perhaps pay for immediately, only to sell at a profit when the price is expected to rise. As a result of their present demand, the present price rises a little; later on, when they begin to sell their stock the increased supply prevents the rise of the price as it was anticipated. Or, again, if the speculators anticipate a fall of the price one-

or two months hence they begin to sell out their stock now when the price is high. Their present sale lowers the existing prices, consumption increases and the future supply decreases owing to which the price does not fall in the future as it was anticipated. Speculation, therefore, lowers the high price of the present, and prevents the fall of price in the future ; it raises the low price of the present and prevents the rise of price in the future—this keeps the price fairly steady, and makes for regular and economic consumption of the commodities concerned as well as of all those goods which are produced out of them. Under-consumption under high prices and over-consumption under low prices are thus both avoided.

Unfortunately, however, speculation does not always run on healthy lines. There are the inexperienced amateurs dabbling in speculation, making wrong anticipations and creating violent fluctuations of price. Of course, they themselves ultimately 'go to the wall' ; but their action makes the society suffer. Even the expert speculators sometimes 'tamper with the market', that is to say, intentionally and artificially alter the prices by 'cornering' goods to be sold ultimately at a great profit. For example, an expert speculator makes a great show of sale at a low price, the other speculators or holders of stock are misled into

the belief that the price is going to fall shortly and so they too sell out their stocks at a low price lest the price should fall lower still. It is the cunning speculator who buys in all these stocks through his agents and corners thereby all the supply to be let loose at a very high price afterwards. Such unhealthy speculation of amateur and gambling speculators makes for violent changes of price and irregular consumption in society.)

{Of course, such dabblers and gamblers are soon found out—the former soon leave the field bankrupt and the latter's trick becomes notoriously known. In a modern highly organized market unhealthy speculation has little scope and so speculation on the whole does good to society. But in ill-organized markets speculation may often become unhealthy and make for fluctuating prices and irregular consumption, and in that case, it is, of course, harmful to society.)

7. The nature of the prices varies with the differences in the conditions of supply and demand, and these conditions depend on the

Classification of Markets regional and time extent of the market. Markets, therefore, are classified on the basis of their Area and Time.

According to area, markets may be local, national and international; and according to time,

available to the forces of the supply of, and the demand for, a commodity, markets may be classified as Very Short Period Market, Short Period Market and Long Period Market.

The area of the market for a commodity is determined by some favourable external conditions.

and also by certain characteristics of the commodity itself. The external conditions are those which

develop the means of communication and information, and also freedom of trade. For example, development of communication, by good roads and bridges, steamships and railways, etc., the post office, telegraph, telephone and cables, published price lists, news papers and trade journals, helps a quick and cheap communication between buyers and sellers living at different places, however distant; and the goods also will be easily transportable to, and from, distant places. This communication is, however, rendered easy by freedom of trade, and is hampered, if there be restrictions on it.

But even when these favourable external conditions are present any and every commodity cannot command a wide market. In order to do so, a commodity must, first of all, be widely demanded by people living at great distances, and must also, through samples and grades, be easily recognized by them. Thirdly, it should be easily transportable to

distant places, for which, of course, it should be not only fairly durable but also of large value in small size, so that the transport charges may for but a small portion of its total value. A commodity, very bulky in size but of low value, cannot have a wide market, because though it can be had cheaper at other places yet adding the freight charges people find it cheaper to get it locally produced. Lastly, again, it must have a large supply as well so that it may be enough to meet the wide demand.

Gold and silver, shares of reputed companies and securities of reputed governments, are widely demanded, easily transportable and recognizable and have large supply too. So they command an international market. Wheat, tea, jute, cotton, etc., are also of that character, though more bulky; but as they satisfy urgent wants and are universally required their markets also are international in space. But district maps, goods made to order to suit individual requirements, and bulky goods of low value like hay, bricks, bedsteads, tables and chairs of inferior quality as well as fresh fish and vegetables which are of a perishable character, have only a small local market.

The character of the market for a commodity depends upon the conditions of the supply and demand. These conditions vary according to the size of the market. But they differ more widely

still according to the time, for the price in the very short period will be different from what it will be in the short period or long period. In the following chapter we shall have a preliminary survey of values so that it may be the easier for us to understand the nature of the prices of goods under varying conditions of supply.

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Todd—Mechanism of Exchange, Chap. III.

Chapman—Outlines, Chap. XII.

CHAPTER III

PRELIMINARY SURVEY OF VALUES.

1. We may now go back to the Law of Diminishing Utility and the concept of marginal utility to deduce from them a counterpart of the law of demand, namely the law of supply. Demand, as we

The Law of Supply

know, (refer to pp. 50-51) rises with the fall of price and falls with the rise of price, of course, other things remaining the same. (The law of supply is,) however, quite the opposite. (As the supply of a commodity increases, its marginal utility will, other things remaining the same, fall, and as the economic value of goods depends upon marginal utility, it follows that with the increase of supply, price falls. Again when the supply decreases, marginal utility increases and the price also rises; from this it follows that with the decrease of the supply, the price rises. Combining the two we may lay down the law of supply as follows:—Supply increases with a rise of price and decreases with a fall of price. The laws of demand and supply indicate the conduct of the buyers and the sellers under the change of prices. When the price rises, the buyers will demand less and the sellers

will supply more ; and when it falls, the buyers will demand more and the sellers will supply less

2. We have seen that from the demand side it is marginal utility of a commodity that determines

its economic value or price ; but

Supply and
cost of pro-
duction

what is it that determines the price from the supply side ? Now there

are certain goods which are repro-

ducible, that is to say, their supply can be increased by the efforts of man ; there are other goods which are irreproducible because they have a permanently fixed supply, for example, the paintings of a master artist who is dead. The former involve a cost of production and the latter do not. From the supply side, therefore, the price of a reproducible commodity is regulated by its cost of production and that of an irreproducible commodity by a certain value which the seller attaches to it himself, and below which he is not prepared to accept. The supply price is, therefore, except in the case of irreproducible commodities, determined by the cost of production.

3. The term 'cost of production' may, however, mean Real Cost or Money Cost, of production. The real cost of a commodity refers

elements of cost
of production

to all the efforts, abstinences, sacrifices and risk, involved in production. It is the cost of

production viewed from the point of view of society. In order to produce anything the labourers must undergo trouble, the capital-owner must sacrifice his present pleasure of consumption in order to save capital, the landlord must give up the use of his land and buildings, and the entrepreneur must undertake the risk and the trouble of organization and sale of the products. Real cost may, therefore, be regarded as the subjective cost of producing a commodity.

But in business transactions, such efforts and abstinences cannot be measured except in terms of the money that must be paid as price in order that they may be forthcoming. Thus the actual money expenses incurred by the producer before the product is ready for sale is called the money cost or expenses of production, and it is in this sense that the term 'cost of production' is generally used.

This cost of production consists of two parts—**Prime Cost** and **Supplementary Cost**. The prime cost of a particular unit of a commodity is the cost specifically incurred for that unit alone apart from the general expenses of the firm. It varies therefore directly with the output and ceases if the firm stops work for a short time. It includes such items of expenses as wages, the prices of the raw materials, fuel and lighting. The

supplementary cost refers to the general expenses or the establishment charges which do not appreciably increase with the increase of output, which must be incurred whether the units produced are many or few, and continue even when the business stops work for a while. It consists of such items as the cost of the permanent plant, the rent charges, interest, management salaries and insurance charges and the cost of the wear and tear of machinery and buildings.

The supplementary cost is realized from all the units produced but the full cost of any unit is composed of the prime cost incurred for itself and a part of the supplementary cost called 'on-cost'.

4. The price of a reproducible commodity, as we said, is determined from the supply side by the cost of production. Its influence, as we shall see in chapter IV, varies under different conditions of the market; but under normal conditions of supply and demand, the cost of production does in fact exert its fullest influence upon the supply price of the commodity concerned. But there are, in an industry under competition, so many rival producers selling the same commodity in the same market. The price at the same time in the market must be the same, but the different producers produce at different costs. Whose cost of production then determines value?

To answer this question we have to study the nature of the different firms in an industry. Some of them are very efficient, others are positively inefficient, and there are many firms between the two classes. Before the demand for the commodity and its supply have become steady, all the firms may have to sell at a loss, or all may gain profits, according as the demand is very dull or brisk. But by the time demand and supply become fairly steady, the inefficient firms will vanish. In other words, there will be found three classes of firms, the super-marginal, the marginal and the sub-marginal. The sub-marginal firms ultimately vanish leaving the field to the super-marginal and the marginal ones. The marginal firms are those which are just efficient enough to maintain their position in the long run, producing at a cost so high that the price realized just covers their full expenses of production including a remuneration to them as their wages of management, but leaving practically little surplus as net profits. The super-marginal firms whose cost of production is less than that of the marginal firms would, of course, earn profits more or less according to the degree of their efficiency. In the long run, therefore, the price of a commodity must cover the expenses of production of the marginal firms if their

Marginal Firms
and Marginal
Cost

supply is to be forthcoming to meet the total demand for the commodity. In other words, price in the long run becomes equal to the marginal cost of production.

The marginal firm is sometimes called a Representative Firm which Professor Marshall defines as "one which has had a

A Representative Firm fairly long life, and fair success, which is managed with normal

ability, and which has normal access to the economies, External and Internal, which belong to that aggregate volume of production".* Chapman says that a representative firm is rather "a fully grown firm" earning good profits, and this term to represent a marginal firm is, according to him, not a very happy choice.

5. We have just learnt that the price of a commodity in the long run settles at the marginal cost of production. But this relation

marginal Cost and Price between price and marginal cost is disturbed in the very short

period. For example, in the very short period, say on any particular day in the market, the supply is more or less limited to the existing stock but the demand may rise or fall considerably. With the rise or fall of the demand on a day in the market the supply cannot increase or decrease. The price on

*Economics of Industry, BK. IV. XIII. I.

that day will, therefore, depend mainly upon the intensity of the demand and the cost of production will exert but little influence. The price may fall far below the full marginal cost, or rise far above it, according as the demand is very small or great.

Of course this situation cannot continue always. If the price falls below the marginal cost and this continues for long without a tendency for the price to rise, the marginal producers will gradually withdraw their capital, labour and organization and the price will gradually rise upwards until in the long run it is equal to the cost of production of those producers who stand at the margin under the altered circumstances. Or, again, if the price rises above the marginal cost, high profits will induce new producers to come into the field, old firms will extend their scale of production. The supply of the commodity concerned will increase and the price will come downwards. The inefficient producers will be gradually weeded out and those producers only will stay on who can do so advantageously, and the price will stand at the level where it covers the full expenses of the producers who stand at the margin under the changed circumstances.

REFERENCES :—

- Marshall—*Economics of Industry*, BK. V. III.—IV.
Chapman—*Outlines*, Chap. xv.

CHAPTER IV

VALUE AND PRICES

1. In this chapter we shall study the fundamental principles which fix the value of goods and also the actual prices in the market under varying conditions of supply.

(In economics the term Value is used in two senses—value in use or utility and value in exchange or price. In order to have value in exchange a commodity must have value in use. But a commodity having great or even an infinite value in use may not necessarily have any value in exchange; for example, air and water have infinite utility but ordinarily they have no exchange value, for one can have them more than enough for the mere wish. Thus in order to have value in exchange a commodity must not only be useful but also scarce in supply in relation to the demand. In other words, exchange value or price depends upon two factors—Utility and Scarcity. Utility as a determinant of value has, however, no reference to total utility but to marginal utility, for it is the utility of any one unit that determines the economic importance of any other unit of a given stock](refer to pp. 41-43).

(The utility of a commodity is considered from the demand side and its scarcity from the supply side. We may, therefore, say that price is determined by Demand and Supply. But exactly at what point it will be fixed depends upon the equilibrium of demand and supply; that is to say, price settles at the point where just that amount is supplied which is demanded.)

(Let us take a concrete illustration. Suppose the amounts of wheat demanded and supplied at different prices are as given in the table below :

Prices per maund in Rs.	Demand in thousand mds.	Supply in thousand mds.
Rs. 10	100	500
9	200	400
8	300	300
7	400	200
6	500	100

(It will be noticed that at Rs. 8 per maund the amount of wheat demanded is 300 thousand maunds and that is also the amount of supply forthcoming at the same price. At any other price demand and supply do not equate. Rs. 8 therefore is the equilibrium price and 300 thousand maunds is the equilibrium amount. If the price rises to Rs. 9 the demand falls to 200 thousand maunds while the supply increases to 400. The supply

being greater than the demand, the buyers will show no anxiety for purchase; on the contrary, the competition among sellers, many of whom will be anxious to sell at far lower prices, will force the price downwards until it reaches Rs. 8. Again if the price falls to Rs. 7, the demand increases to 400 thousand maunds and the supply drops down to 200. The force of competition will now work in favour of the sellers and against the buyers. The competition among buyers, many of whom are willing to buy at far higher prices, will force the price upwards until it stands at Rs. 8. Thus we find that if there be any disturbance of the equilibrium price, the play of the economic forces of demand and supply tries to re-establish it to the old level or brings about a new equilibrium.)

(It is also obvious that in the market there will be any buyers willing to buy even at higher prices than Rs. 8, there are many again who are willing to buy none at that rate, and there are others still, the Marginal Buyers, who are just induced to buy at Rs. 8. Similarly, there are some sellers who will sell at a price lower than Rs. 8, others who will sell none and others again, the Marginal Sellers, who are just willing to sell at Rs. 8. The price is therefore determined by the "marginal pair", that is to say, the group of marginal buyers and the group of marginal sellers, and is fixed

at the point where the marginal demand and price and the marginal supply price are equal.]

[Under some circumstances, however, demand might play a more important part than supply; as it does in determining the prices of reproducible goods in the very short period and also of irreproducible goods; or supply might be more important than demand, as it is in determining long period prices. But we shall not be justified in concluding therefrom that demand alone fixes the price in some cases, and supply alone does it in other cases. Just as we cannot say which blade of a pair of scissors cuts a piece of paper while one is kept fixed and the other is moved—for both the blades must be present to cut the paper—so we cannot say that demand alone fixes the price while supply is more or less fixed, or that supply alone does it in the long period while demand keeps steady. Price is fixed by demand and supply together though one of them may be more active than the other according to circumstances.]

[But even then it is not quite accurate to say that demand and supply together fix the price, for price itself, as we have seen, determines the amount of demand and of supply. It therefore appears like an argument in a circle. But the fact is the relationship between demand and supply ^{of prices} is not one of cause and effect but of mutual causation.]

2. (Prices may be of Commodities and Services
 The commodities again are either irreproducible
 or reproducible; and the latter
 Kinds of prices may again be produced under
 competition or monopoly and also
 under conditions of increasing, decreasing and
constant cost. The services referred to are those
 of land, labour, capital and entrepreneurship and
 their prices will be studied under Distribution in
 Book V. In this and the following chapters under
Exchange we shall confine ourselves to the study
 of the prices of commodities only under the varying
 conditions of production.

3. (The supply of irreproducible goods, like
 the paintings of a master artist who is dead, old
 coins and stamps and rare editions
 Prices of irreproducible goods of books, is permanently fixed,
 and so in considering their price,
 the question of their cost of production does not
 arise. The supply price therefore will be a mere
 subjective valuation made by the seller. This
 much may be said that the maximum point
 upto which the price of an irreproducible commodity
 can rise is the highest price offered by any possible
 buyer and the minimum point upto which it can fall
 is the seller's subjective valuation or the second highest
 price offered by any competing buyer, according as the
 one or the other of these two prices is the higher.)

If there be only one unit, the buyer offering the highest price will get it. If there be a number of units, the price will be fixed by the marginal demand price. If, for example, there are three units of a rare stamp and the demand prices for them severally be Rs. 20, Rs. 15 and Rs. 10, then considered as one of the stock, each should sell for Rs. 10. Though at any time, when the seller's valuation is lower than Rs. 10, the price may be fixed below it by the superior bargaining of the buyer, yet *normally*, each unit of the stamp will sell for Rs. 10. What is important to note in connection with the prices of rare and unique things is that as there is no question of the cost of production the *normal* price of such a commodity will be determined almost exclusively by the demand side or marginal utility.)

4. (The nature of the price of a reproducible commodity varies according to the time available to the supply to adjust itself to the demand. We have therefore to study the very short period, or Market, price, the short period, or Sub-normal, price and the long period, or Normal, price.) As goods can be produced under competition or monopoly, we shall first take up the competitive price under the three varying conditions.)

(The Market Price is the result of a temporary equilibrium of demand and supply in the very short

period, say on any day in the market. Whether the commodity is perishable like fish or fairly durable like tea, wheat, etc., its supply on any day is limited to the stock actually exposed for sale or at least 'in sight'. There is no time for the supply to increase if demand rises suddenly, nor can the existing supply withdraw on a sudden fall of demand. The price on a day, therefore, though determined by the existing supply and demand, will be more under the influence of demand than of supply, and is susceptible to wide fluctuations from day to day.) This holds very true in the case of perishable goods, like fish, the daily supply of which must be sold out.) Of course, in the case of fairly durable goods, the supply of which may be withheld for sometime, the fluctuations of market prices are less violent; but the goods of seasonal supply and consumption, like winter and summer garments and sporting materials of different seasons, show considerable seasonal price variations though no daily variations in one season. This fact explains why large retail stores hold winter and summer sales at reduced prices. The prices of goods that are of seasonal supply but are consumed throughout the year, e. g. wheat, tea, etc., would also show similar fluctuations but for the steadying influence of speculation upon them.

If demand takes a sudden leap on any day in the market, all the sellers can sell at a profit and the price may rise far above the marginal cost of production; if, however, the demand drops suddenly, all the sellers may have to sell at a price below their cost of production and so the price may go below the marginal cost. The cost of production, therefore, exerts but little influence upon the market price of goods.

5. But the chance profits and losses from the market price cannot continue for long. If the demand increased or decreased demand continues, new forces will come into play, and a new price, called the Sub-normal Price, will be established. It is the result of the equilibrium of demand and supply in the short period, say of some weeks or months.

Supply will have now more time to approach the demand, that is to say, to increase a little if demand rises, or to decrease a little if it falls. But as the factors of production, for example, land, buildings, machinery, labourers, etc., cannot be at once increased, the increased supply will be provided by the existing factors of production working only for longer hours; and the decreased supply also will come from the existing factors of production working for less time, for they cannot so soon be withdrawn from the industry.

If there were a rise of price resulting from an increase of demand, the sub-normal price will fall a little because of some increase of the supply but still it will keep above the marginal cost; and if there were a fall of price as a result of a decrease of demand, it will rise up a little because of some decrease of the supply, but even then it will keep below the marginal cost of production. It is therefore important to note that as supply gets more time in the short period to adjust itself to demand, cost of production exerts a greater influence upon sub-normal price than upon the market price.

Let us go a step further and study the nature of the price of a commodity in the long period, say of several months and years. What is a long period for one industry may, however, be short for another and very long for a third industry. It all depends on the forces affecting the demand for, and the supply of, the commodity. What is necessary for us to note is that all the forces of demand and supply get time enough to work out their full effects and to place demand and supply on a regular footing. This long period price is what is technically called the Normal Price, and it results from the equilibrium of demand and supply in the long run.

Demand in this period becomes regular and steady. If it has increased or decreased, the produ-

cers have got full time to increase or decrease the necessary factors of production and to adjust the supply to the demand. Ultimately such producers only remain in the field who can do so advantageously ; that is, the sub-marginal producers vanish leaving the field to the super-marginal and the marginal ones (refer to pp.231-233) The normal price becomes equal to the marginal cost of production, because in the long run the price must be high enough to cover the full expenses of the marginal producers whose products are absolutely necessary to meet the full demand for the commodity. In the long run, therefore, the demand having been steady, it is the supply or the marginal cost of production that settles where the normal price of a commodity should stand.

But one might ask Does normal price actually exist? Normal price is said to result when the forces of demand and supply get full time to work themselves out, and demand and supply become fully adjusted. But these forces never remain the same for a long time to allow demand and supply to be fully adjusted to each other in any progressive community. For example, change of fashions and tastes, introduction of substitutes in the market, a natural increase of population or a decrease of it from famine, war and pestilences, change of the value of money and of the level of

prosperity, etc., always alter the demand for a commodity. On the other hand, improvement of old machinery, invention of new machines, better organization of an industry, greater efficiency of labour, cheapening of raw materials, or rise of their prices, change in the value of money, all will materially affect the cost of production and the supply of the commodity. In a progressive community one or other of these changes always occurs and prevents the forces of demand and of supply to remain the same for any great length of time. While therefore one makes a fair estimate of the normal price expected to be settled at a point and the market price approaches it, a fresh change occurs affecting demand or supply. A new force comes in, a new normal point is to be thought of, and the market price again runs after it. Thus normal price is a centre, but it is a movable centre always shifting its position which the market price always approaches at but scarcely ever attains.

The market price may, however, reach the normal price in a stagnant community, where fashions and tastes do not change, where the standard of life keeps fixed, population remains stationary, and the methods of production and skill of labour do not improve. Otherwise normal price is only an ideal price. As Chapman says,

"Normal results donot actually exist, their universe is the abstract.")

7. (There is some difficulty in understanding the relation between the prices of joint-products and their cost of production. They

Price of joint-products are goods produced simultaneously through the same processes of production, e.g , mutton and wool, oil and oil-cakes, rice and hay, etc. Their cost of production is joint and it is not possible to apportion the joint-cost to the different products separately. They have therefore only a collective, and not a separate, normal value. Under conditions of competition the individual produders are forced to accept the price for y one of the joint-products as determined by the demand for it and its supply ; in other words, they follow the principle of "charging what the traffic will bear", in the sense that they have to accept whatever price the commodity fetches from the market. But the total prices of all the joint-products must in the long run cover their full joint-costs under the marginal producers.)

. The effect of a permanent change of demand upon the normal price of a commodity will depend upon whether it is produced under increasing returns, or decreasing returns, or constant returns.

If, for example, there is increase of demand, the i ediate effect of it will, of course, be a rise of

the price of any and every commodity. If the commodity is produced under increasing returns, the larger scale of production necessitated by the increase of demand will result in greater economies and lower cost per unit of the product. The new normal price will therefore be lower than the old. If the commodity is produced under decreasing returns, the increased supply will be forthcoming at a higher cost per unit, owing to which the new normal price will be higher than the previous, unless there be simultaneous improvements of the method of production. The price of a commodity produced under constant returns will, of course, fall to the old level again, because the cost per unit of the increased supply will remain constant.

If there be a decrease of demand, the immediate effect will be a fall of the price of any and every commodity; but for reasons obvious, the new normal price of a commodity produced under increasing returns will rise above, that of a commodity under decreasing returns will fall below, and the price of a commodity under constant returns will stand equal to, the old price.

REFERENCES :—

Chapman—*Outlines*, Chapters xv—xvii.

Marshall—*Economics of Industry*, Bk. V. ii—vii.

CHAPTER V

MONOPOLY PRICE

1. The price of a commodity produced under free competition is not in the control of any of the producers but they are rather at the mercy of the conditions of demand and supply in the market, **Monopoly price and competitive price** The competitive price therefore ultimately settles at the marginal cost of production. But a different principle rules the price of a commodity produced under monopoly. (The monopolist enjoys a control over the supply and though he cannot control the price as soon as the supply is on the market yet he can do so by regulating the the supply. Naturally, unless he is influenced by motives other than economic, he will put just that amount of supply on the market as will enable him to fix the price as high above his marginal cost of production * as possible with a view to realizing maximum profits.)

(The law of monopoly price, therefore, may be

* In this case, it cannot, of course, refer to the expenses of the marginal producer, but it means, the expenses incurred by the producer for the last increment of his products.

thus stated :—The monopolist having control over the price will geneareally fix it at the point which brings him the maximum profits. This will not necessarily make monopoly price an exorbitantly high price, for in order to earn maximum profits it may be necessary to charge a high price, or a medium price or a low price, according to the degree of the elasticity of demand of his commodity. The monopolist may charge a uniform price or he may make price discrimination between (i) persons, (ii) classes of persons, (iii) uses of his product and (iv) localities ; that is to say, he may charge different rates from different individuals, as doctors do, or from different classes of people, as is done by railway and steamship companies ; he may also charge different rates for the different uses of his product as a gas company charges a higher price for gas when it is used for lighting purposes and a lower price when it is used for fuel, or as the railways charge one rate for carrying coal and another for motor cars ; the monopolist may also charge different prices for his commodity in different localities and countries according to their level of income and paying capacity. But whether he charges a uniform price or makes price discrimination his object in either case is the maximization of his profits. This principle of imposing as high

price on the commodity as it can bear in order to bring the highest profits for the monopolist is also technically called 'the principle of charging what the traffic will bear'. *)

(There are, however, certain limitations to this law of monopoly price. The monopolist, in his own interest, may be satisfied with profits lower than the maximum and so charge a lower price than he would like to, if he fears government control, or the introduction of substitutes, or competition of powerful rivals. If, again, the commodity is a new one, he may charge at first a low price in order to habituate the people to its use, after which, of course, he may raise the price.)

2. (Although monopoly price is high in the sense that generally it keeps well above the marginal cost of production yet monopoly price need not always be higher than the competitive price. The monopoly price is also subject to the forces of demand and supply, and although the

* Note that this principle as a law of monopoly price has a meaning different from what it has as a law of the price of joint-products. Where, however, a monopoly product is under joint-cost the monopolist follows the principle in both the senses, as the railways do in fixing the rates of their services. For a fuller discussion students may refer to Taussig's Principles, Vol. II, Chapter 62.

monopolist can control the supply, he cannot control the nature of the demand for his commodity. If the demand be inelastic he may, of course, charge a high price, but otherwise his power to fix the price very high is limited. Moreover, if a commodity be produced under increasing return, the larger the scale of its production the lower is the cost of production per unit of output and the cheaper can be the price. If there be a number of competing firms the average scale of production in the firms of the industry will certainly be smaller than that in a firm that enjoys the monopoly of production. The marginal cost of production of the commodity will therefore be lower under monopoly than under competition and so the monopolist will be in a position to charge a price which is lower than the normal competitive price and at the same time brings him maximum profits. This explains the cheap rates charged by the public utility services, like the railway and tramcar companies, the postal and telegraphic department and also the electric and gas supply companies. A monopoly, therefore, is not necessarily detrimental to the economic interests of the society.)

(The monopoly gains are derived from two factors—greater economy of production and the control over price. If they arise chiefly from the greater economies that result from large scale

production and from the elimination of the wastes of competition the price is likely to be low. If, however, the monopolist having no rivalry to face, grows negligent towards the efficient management and organization of his business but aims at earning profits chiefly by exercising his control over price, the monopoly price is likely to be higher than the competitive price. It is this that accounts for the popular dislike for monopoly in general and necessitates state control over monopoly industries in particular cases. }

REFERENCES :—

Chapman—*Outlines of Political Economy*, Chap. XVIII.

Ely—*Outlines of Economics*, Chap. XIII.

CHAPTER VI

MONEY .

1. When man first took to exchange of commodities and services (refer to p. 154) the method of exchange was barter. ut with the progress and complexity of economic life it was found to be a very inconvenient system.)

(Under barter there is, first of all, the "difficulty of a double coincidence". If a man requires a pair of shoes in exchange for a quantity of wheat, he must find out a man Inconveniences of barter who not only has shoes to barter but also wants wheat in exchange ; otherwise no transaction between them is possible. Even when a man having shoes to offer is found out after much waste of time, it may be that he is not very much willing to accept wheat in exchange. Naturally, in order to induce him to accept wheat the man will have to enter into a bargain unfavourable to himself.

ut the greatest difficulty that very often presents itself under barter is the difficulty of "accommodating the units of sales to the units of purchases". If a man requires ten different things and has a calf to exchange he cannot divide up the calf into ten parts, when the required commodities are to be purchased from ten different persons !

Another inconvenience of barter is the fact that it provides no common measure of values so that the values of all goods may be compared at once and easily, for under barter the value of a commodity is to be expressed in terms of one thousand and one commodities for which it may be exchanged. Under the present monetary system in India, for example, the values of all things are expressed in rupees and it is so convenient to make at once a comparative valuation of the different goods in society. Moreover, barter inevitably leads to an endless higgling for the terms of exchange, which in its turn involves much loss of time and botheration.

(Thus the impossibility of transacting business speedily and satisfactorily owing to the above difficulties of the barter system has led man to devise a common medium of exchange which is called Money.)

2. The present economic stage is therefore sometimes distinguished from the stage of barter and is called the stage of money. Let us, see what functions money fulfils in modern communities.

(The functions of money may be broadly classified as the essential and the derived functions.

Functions of
Money

The essential functions are that it is the medium of all exchanges and the measure, or common denominator, of all values. Anything which goes by the name

of money does so because it is the means or medium whereby all exchange transactions are made. It has thus replaced the exchange of goods for goods; but goods are now sold for money with which again other goods are purchased. It has therefore come in as a "universal third commodity" for which all goods are being exchanged. Secondly, under barter, as there is no common medium of exchange the values of all goods are to be expressed in as many ways as there are goods for exchange. But when something is accepted as the medium of all exchanges the value of every commodity is measured by it, and is expressed in terms of this commodity. Money therefore is the common measure and denominator of all values.)

[Apart from these essential functions there are others which only follow from them. For example, money is used by man for storing up values. A man having a surplus of some goods of value will naturally wish to store it up for future use, but he does not store up the goods actually on account of many inconveniences. They may be heavy and perhaps cannot be handled easily for being exchanged for other goods. He therefore sells them out, and stores up the values realized in money. Money again is used for transference of values. When any value is to be sent from one place to another it is sent in money, and not in any other commodity,

because the man to whom it is sent may not require, or wish, to accept it. Another very important function of money is that it serves as a standard of deferred payments. When people enter into any credit transactions the payment is only postponed or deferred to a later date. But the obligations of the debtors are registered in terms of money. If, for example, a peasant borrows seeds from a dealer, he does not pay the value thereof by returning the same amount of seeds or any other commodity, but by paying a certain sum of money estimated on the money value of the seeds at the time when the transaction takes place. If a man buys anything on credit, he finds it convenient to pay the value of the same not in anything else but money, because as medium of all exchanges it will be accepted always and everywhere in the country.]

3. (In order to fulfil these functions satisfactorily the commodity chosen as the money material should possess certain qualities. It goes without saying that no commodity will be a medium of exchange unless it is universally accepted in the community, for which, of course, it should be one desired by people for the sake of other reasons, and should also be of uniform quality so that they may recognise it at once. In order that they may store up and transfer values cheaply

Qualities re-
quired of the
money material

and conveniently, the commodity chosen for money should be storable and transferable, for which it should be durable and of large value in small size. It should also have a fixity of value so that it may be safely stored and may serve as a good standard of deferred payments. If it changes in value frequently, people may lose or gain when they store it up, and it will be difficult also to maintain justice between debtors and creditors.)

(Apart from these qualities, the money material should be easily malleable and divisible so that they may be cut, melted and beaten into different forms and sizes for coinage without loss of value. Lastly, it should have a sufficiently large supply well so that the total supply of money may be large enough for the volume of business in the community. Thus universal acceptability, homogeneity, storability and transportability, involving durability and large value in small size, fixity of value, malleability and divisibility as well as sufficient supply, are the attributes required of the ideal money material.)

4. Human societies have at one time or other made experiments with wheat, rice, cattle, furs, 'cowries' (shells), iron, copper, Choice of the money material nickel, silver, gold, platinum, etc., for money purposes and have finally chosen gold and silver for coins of large value, and nickel and copper for the subsidiary coins of petty

values. There has been, so to say, a process of selection and survival of the fittest. One by one ordinary commodities have left yielding place to two of the precious metals, gold and silver, and to a few cheap metals, like copper and nickel.

The precious metals are admirably endowed with the attributes referred to in the previous section. They serve as ornaments and many other industrial purposes and as such are universally desired for their own sake. Moreover, pure gold and silver are the same everywhere, and separated from alloy they are uniform in quality. They are durable and possess large value in small size and as such can be safely and conveniently stored and transferred. They can be cut, melted and beaten into the desired shape and yet they retain their full value.

They are, it is true, not absolutely fixed in value, but their value fluctuates less widely and frequently than that of any other commodity we know of. Moreover, the supply of gold and silver is sufficiently large to meet all demands for monetary purpose. Di and possesses great value in small size but it loses all value when cut or melted, nor is it available in sufficient quantity. Platinum again is too hard for coinage. All these comparative advantages of silver and gold explain why the final choice of mankind has fallen upon

the for the purpose of money. Nickel and copper are still used but only for petty transactions, for which purpose gold and silver are not suitable, because the coins in that case will have to be made very very tiny.))

4. The precious metals were at first used in the form of ingots. Every time a transaction was made with them they had to be assayed and weighed for the ascertainment of their value. This was extremely cumbersome and involved much waste of time as well. The big merchants who travelled to different market centres for trade thought it convenient to make their ingots of a fixed standard with their private marks on them. Those who knew the merchants and had confidence in them ascertained the value of the ingots by simply weighing them, their fineness having been taken for granted. These ingots, however, were sometimes clipped or otherwise tampered with and were also worn out by constant handling in such a way that it was sometimes difficult to detect and to ascertain what amount of metal has been lost in the process.

Hence the practice grew in modern times of issuing the metals in the form of coins with their edges milled and their surface on both sides covered by designs, so that any attempt at clipping or rubbing off the metal may affect the designs and

be detected at once. But after all, coins issued by private merchants or other citizens could not command the universal confidence of the public. Hence the function of coinage was taken up by government which alone could guarantee the fineness and weight of a coin and claim the confidence of all in society. At present government issues the coins, marks them with its own designs, fixes the weight and fineness of the metal and the value of the coins and declares them at the same time legal tender making thereby their acceptance compulsory. The universal acceptability of the coins is therefore now based upon government's order, but it must be remembered that government has only sanctioned a usage that grew up in society. No government can force any form of money upon society against all popular will.

5. (In issuing the coins government should follow certain principles that will determine the quality of the coinage. For example, the coins should have uniformity of quality, convenience of handling that will depend on size and weight, difficulty of counterfeiting and of being tampered with, durability and lastly, equality between the face or legal value and the metallic, bullion or intrinsic value of the chief coins so that people may use them without loss for foreign payments and storage of value.)

But the fact of government coinage has raised a new difficulty. The coin has now two values; namely, its intrinsic value as bullion and its legal value as fixed by government. The two values should be equal; if the intrinsic value is greater than the legal value, that is to say, if the coin is 'strong' people will either melt it down or sell it by weight and the coin will disappear; if, again, the intrinsic value is less than the legal value, that is, if the coin be 'weak' it may mean that government is either cheating the public or indirectly taxing them by forcing them to accept a coin at a value less than its intrinsic value. It is the duty of government to see that the coins issued are 'right', in the sense that their face and intrinsic values are equal. Of course, it is very difficult to maintain the equality of the two values; for even if they are exactly equal when the coin is first issued, a change in the market value of the metal will bring about a difference between them.

The means adopted by England for maintaining the parity between the two values of the sovereign, the chief coin of the country, is the maintenance of an Open or Free Mint coupled with 'gratuitous' coinage. Government has laid down that the Mint will coin any number of ounces of gold of 22 carats standard, i. e. eleven-twelfths fine, into sovereigns.

at the rate of 1869 sovereigns for 480 ounces of gold. The Mint Price of the English standard gold therefore stands at £3. 17s. 10½d. per ounce. As a matter of fact the public do not approach the Mint directly, but they present the gold to the Bank of England which is, so to say, the agent of the Mint, and the Bank pays sovereigns at the rate of £3. 17s. 9d. per ounce. It is, therefore, the Bank Price of gold, and is 1½d less than the Mint Price. But then it should be noted that the owners of the bullion are prepared to lose 1½d rather than wait till the bullion is assayed, weighed and coined by the Mint. The Mint, moreover, charges no fee for meeting the cost of coinage. The result of the Free Mint and gratuitous coinage is that the English sovereign is an absolutely 'right' coin. If the value of metal in the Bullion Market rises and the sovereign becomes worth 21 shillings as bullion, people melt down the sovereigns and sell them out as metal, making thereby a profit of 1s. per sovereign. This results in an increase of bullion in the market and its price naturally drops down until it stops at 20 shillings. Or again, if the value of gold in the market falls, and the bullion value of the sovereign drops down to 19 shillings, people approach the Bank of England with gold and take out a sovereign for 19 shillings. This decreases the supply of gold

in the market to be followed by a rise of its price until the metallic content of the sovereign becomes worth 20 shillings again. Of course, the Free Mint alone cannot maintain the parity between the two values of a coin unless it is coupled with gratuitous coinage and there is a free market for metals.

(Coinage is said to be gratuitous when government charges no fee for it; when the fee is equal to the cost of coinage it is called 'Brassage' and if it exceeds the cost and leaves a profit to the government it is called 'Seigniorage'. When government does not allow the public to approach the Mint with bullion and to demand coins instead there is said to be Closed Mint or Limited Coinage as opposed to the Open Mint or Free Coinage.)

7. Apart from the money in the form of metallic coins, we are also familiar with some other media of exchange; for example, paper money, cheques, bank drafts, promissory notes, bills of exchange and other kinds of what is called 'Bankers' Money.*

* A *cheque* is a written order to his banker drawn by a depositor for paying a certain sum on his account to bearer or the person named. A *bank draft* is drawn by one bank upon another asking for the payment of a sum to bearer or to order. A *bill of exchange* is a written order to a buyer drawn by a seller asking for the payment of a sum of money by a certain date for value received.

Paper money is issued either by government, or by authorized banks. It is also declared legal tender. The notes, as they are called, therefore circulate freely as media of exchange, but the various forms of Banker's Money are accepted only on strictly personal confidence of the men who give them. Their circulation, therefore, is not free but limited in a small circle within which the financial soundness of the drawers is well known.

8. (The use of so many media of exchange has raised the question as to whether all of them should

be regarded as money. The
Definition answer to it will depend upon what is meant by money. Some economists have given it a narrow definition while others understand it in a broader sense. In the narrow sense, money is anything that passes freely from hand to hand as a medium of exchange and is generally received in final discharge of all debts. As Professor Kinley says, the term 'money' should be limited "to that part of the medium of exchange which passes generally current in exchange and settlement of debts, without making the discharge of obligations contingent on the action of a third party, or on the action of the payer by promising redemption if the money article does not pass." * According to this definition money excludes cheques, drafts and bills of

* Money—Chapter V. 6.

exchange, etc., which have circulation only in limited circles, and it consists of the metallic coins and the paper money, which alone have free circulation in society and are always accepted universally in final discharge of debts.

ut some economists maintain that money is what does "money's work", that is to say, plays the part of a medium of exchange, and so the cheques, drafts, etc., should also be legitimately regarded as money.

Thus we find that there are moneys of free circulation and of restricted circulation. The former may be distinguished as Currency and the latter, which are accepted by men only when they have confidence in the payer, may be called Credit Papers. In India, therefore, currency would refer to the sovereigns, rupees, half-rupees and other metallic coins of the Government of India and also the notes issued by it through its Paper Currency Department.)

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- Gide—Principles of Political Economy (Veditz) Bk. III.
Chap. II.
Todd—Mechanism of Exchange, Chapters IV and VI.

CHAPTER VII

CURRENCY

1. In this chapter we shall deal with currency only. We have learnt that currency consists of all the metallic coins issued by government and the paper which may be issued either by government or by any bank or banks legally authorized to issue notes. Such a variety of currency is the result of an attempt at economizing metals. As we shall just see, currency has passed through three stages—from currency with full intrinsic value to currency of partial intrinsic value and then to currency of no intrinsic value. Not that with the evolution of one form of currency, the previous form vanished but all the three classes of currency exist together, each having its own uses in society.

2. (Government first adopted the policy of issuing coins of full intrinsic value but it was soon perceived that such a policy involved an economic waste. The use of metals as money entails a heavy cost that must be borne by the people themselves. The cost of maintaining the mint, of purchasing the metals, of issuing coins and of re-issuing them when worn out, place a heavy burden of taxation on the people. Hence the necessity of economizing metals as far as possible.)

(The first step in the direction of economy was taken by issuing two classes of coins; namely, the Standard Coins with full intrinsic value and the subsidiary coins, called Token Coins, with partial intrinsic value. People would have the standard coins for large transactions, foreign payments and for the purpose of storing up values; but they could very well use the token coins for the current transactions of petty values at home. The legal values of the tokens are kept considerably above their intrinsic values owing to which people are never tempted to hoard or melt them as long as the intrinsic value does not exceed the face value, which happens however, in very rare cases. This policy of using mainly token money for home transactions not only enables the community to do the same amount of transactions with less quantity of metal but also enables the state to earn a profit, which is added to the general revenues, and thus relieves the people of some burden of taxation.)

(The standard coins are to be distinguished from the tokens by the following characteristics. The standard coins are those to the value of which the values of all other coins in the country are adjusted; they have a free coinage, their face value and intrinsic value are equal, and they are unlimited legal tender, that is to say, a debtor in repayment of his debt

can tender such coins up to any amount and the creditor cannot lawfully refuse to accept them. The token coins, on the contrary, have no free coinage, their face value is considerably higher than their intrinsic value and they are limited legal tender. The sovereign, for example, is a standard coin; but the shilling and the penny are tokens. Similarly, in India, the eight-anna, the four-anna, the two anna and the anna pieces as well as the pice, are all token coins. If a country adopts two kinds of standard money, one of gold and another of silver, there is said to be Bimetallism; when a country uses only one kind of standard money, there is said to be Monometallism.)

(The Indian '*Rupee*' is a peculiar coin. It possesses some characteristics of a standard coin and others of a token coin. For example, like a standard coin, it is a coin to the value of which the values of the token coins of India are adjusted and it is an unlimited legal tender. But on the other hand, like a token, its face value is higher than its intrinsic value by about four annas, and it has no free coinage either. It is, therefore, neither a purely standard coin nor a purely token one, but it may, as Professor Chabiani suggests, be characterized as a 'standard-token' coin.)

3. The economic advantages derived from the use of cheap money, in the form of token coins,

Paper money for current transactions at home, encouraged people to seek further economy, and to devise paper money as a still cheaper medium of exchange. It is in fact carrying the principle of economizing the precious metals a step further ; namely, from the use of token coins with partial intrinsic value to the use of paper money with no intrinsic value. It is obvious that the metal used for coinage is *in a sense* unproductive. We consume goods and services and we use the metallic coins as mere media of exchanging the various goods and services in society. If we could use some cheap material for our monetary purpose then the world's stock of gold and silver would have been available for the purpose of producing various artistic goods that would add to the sum of direct satisfactions. But at present a huge amount of it does nothing more than passing from hand to hand as medium of exchange. Paper money has relieved a good part of it from this unprofitable role. One might say, however, that human society has adopted the precious metals as materials for money not for nothing. They are desired for the sake of themselves, and they have a value of their own. It is this that has given them a universal acceptability and a fitness for being used as money commodity. But why should paper, which is intrinsically worth nothing, be accepted by people as money ?

The section that follows will deal with this question.

4. (It is universal acceptability which has made gold and silver money possible; and it is the same quality that has also made paper currency possible. But the universal acceptability of paper is dependent upon its capacity to satisfactorily fulfil the functions of money: it should be a medium of exchange, it should enable people to store up and transfer value and should also be accepted in final discharge of debts.

To fulfil these functions and thereby to acquire universal acceptability, paper must satisfy certain conditions. It is either convertible when there is a promise on the part of the issuing authority to convert it, into metallic coins on demand, or inconvertible, when it bears no such promise. Both the kinds of paper will be universally accepted if the issuing authority can command the confidence of the public which, in the case of convertible paper, depends upon its immediate conversion on demand and its legal tender quality; and, in the case of inconvertible paper, on the amount issued—so that there be no difficulty for people to get the changes for it when they transact business with it,—on its being declared legal tender and also on government's acceptance of the:

same from the public in payment of government dues.)

(If these conditions be satisfied there is no reason why people should hesitate to accept paper as money. Their legal tender quality, convertibility into specie on demand and acceptance by government, are sufficient safeguards against the dangers of holding notes : people can confidently accept them knowing that government and the public are bound by law to accept them in payment and in discharge of debts. As long as the authorities can command this confidence by a wise issue of the notes so long the paper will be accepted by the public as money.)

5. (Paper money can be classified as follows :—

1. Redeemable or Convertible paper, which can be converted into coins immediately on demand.

It has got two varieties ; namely, Kinds of Paper Money . the Representative paper, which represents an equal sum in coin deposited somewhere, say in a bank or government treasury, e. g. the U. S. A. Silver Dollar Certificates ; and the Fiduciary paper money (L. *fides*, means faith or confidence) which is merely a promise to pay a certain sum of money on demand.

Representative paper is perfectly safe. To fulfil the promise of immediate redemption undertaken by the authorities in issuing fiduciary paper, a strong

reserve has to be maintained consisting of specie, bullion, securities and bills of exchange. That portion of the fiduciary paper which is not backed by specie is called the 'fiduciary portion' of the notes issued. The Government of India notes, which are convertible paper, are of the fiduciary class. They are no doubt backed by a reserve of equal value, but according to the existing law, at least 50 per cent. of this reserve must be in coins, and the rest is the fiduciary portion backed by bullion, British and India Government securities and bills of exchange maturing within three months. Convertible paper is issued either by Government or by banks specially authorized by law.

II. The Inconvertible paper represents no coins and bears no promise of conversion into specie. It is issued by a Government which has no coins and is under financial distress. As it is money by the mere order of the Government it is also called 'fiat' money. The people accept it because of the shortage of other kinds of money in the country and also because it is declared legal tender and is accepted by Government itself from the public in payment of their dues to it.)

6. (Paper money, wisely issued, is economic and convenient for various reasons. It enables a community to do with less quantity of metals and thereby saves the cost of the metals and of issuing

them as coins. It saves also the wear and tear of the coins and the cost of re-issuing them. Both these economies relieve the people of some burden of taxation. Moreover, it increases the capital power of the community to the extent of its value minus the amount kept in the reserve. If the whole world choose to use a large quantity of paper money, less metal will be required for coinage and so the labour and capital needed for mining may be saved and utilized for the production of more useful goods. Lastly, it may be mentioned that paper money is more convenient to handle, specially for large transactions, and it is more economical also to transfer values in it.)*

7. (Paper money, however, is not without its dangers. It is liable to be issued to excess, for except in the case of representative paper, which is rather rare, both the fiduciary and the inconvertible paper may be issued easily by the issuing authorities. In the one case, only a certain proportion of the total value of the notes issued need be kept in the reserve, and in the other, no reserve is necessary. This ease with which paper can be issued may tempt the authorities "to create money" for itself in times of financial stringency. Thus more fiduciary paper may be issued than can be converted into

coins, and the inconvertible notes may be issued to such an extent that whenever any metallic coins are required, people do not get them. In either case, therefore, the note-holders have to suffer.)

(It follows from the above that the value of paper money is less steady than that of metallic money, because it depends on the amount of paper issued which, in its turn, depends on the will of the issuing authorities. Not only that its value is unstable but it is also uncertain, because the government which gives value to it by law may also withdraw it by law. Of course, no government will do it willingly but the force of circumstances may compel it to do so. Moreover, when one government is replaced by another the latter may not honour the notes issued by the former, and in that case they become worth only the paper that they are.)

(Another disadvantage is that unlike metallic money, which is accepted in foreign countries for its intrinsic value, paper money cannot be used in foreign payments. Its value is, therefore, restricted within the jurisdiction of the government which makes it legal tender. Lastly, it is much more liable to damage and destruction than metallic money.)

(The circulation of money in society has been complicated by so many kinds of coins,

convertible and inconvertible paper. The law which regulates their circulation is known as Gresham's Law, so called because it was first clearly set forth by Sir Thomas Gresham, a famous merchant and financier of Elizabeth's time. The law stated in brief is this :—

When good money and bad money are in circulation together, bad money drives out good money. The extinction of good money may take place in one or more of the following three ways—hoarding, melting and sale by weight, and exportation in payment of foreign dues. The following circumstances under which Gresham's Law operates will clear the idea.)

(When newly issued coins are in circulation with worn out ones of the same face value, the latter become comparatively bad money. In making payments at home people instinctively and unconsciously prefer the worn out coins, laying up or hoarding the new ones because of their greater intrinsic value. Secondly, although at home they are equally good legal tender yet whenever exportation of coins becomes necessary for foreign payments it is economically more profitable to export the new coins because of their greater metallic content. Again, our experience in India shows, when people wish to melt coins for the purpose of

ornaments, for obvious reason, it is the new coins which they choose. Thus in one or more of the three processes new coins vanish. The old coins go on in circulation and they would do so indefinitely unless government recall the worn out coins)

(Similar process of the extinction of good money will work when strong money and weak money, weak money and right money, right and weak money, of the same denomination, and also when metallic money and depreciated paper money, are put into circulation together.

(Lastly, when two kinds of standard coins, one of gold and another of silver, are in use as under bimetallism, or when a gold coin and a silver coin are full legal tender in a country, as we have the sovereign and the rupee in India, the one which is more valuable as bullion goes out of circulation through the same three processes. In India, both the sovereign and the rupee are limited legal tender but whereas the former is an absolutely right money the latter is a weak money. It is the rupee which is preferred for internal payments and and the sovereign is either stored up, or melted for ornaments, or exported for foreign payments.)

There are, however, certain limitations to Gresham's Law. It is bad money, and not good money, that goes out of circulation, if the bad money is refused by people either because of custom or

popular dislike. If, for example, people refuse to accept payments in paper money but want metallic money, paper money becomes bad money and it goes out of circulation. ^{as in Germany in 1919} Secondly, good money and bad money will both remain in circulation if the total supply of money falls short of the business requirements of the community. Owing to the shortage of money there will be a fall of the price level of goods, which will encourage more exports from the country, and so there will arise no necessity of exporting coins abroad. Moreover, the shortage of money will compel people to use all kinds of money, good and bad, and there will be no desire for melting or hoarding.

REFERENCES :—

- Gide—Principles of Political Economy (Veditz) Book III.
Chap. III.
Todd—Mechanism of Exchange, Chapters v, vi and viii.

EL MENT OF CONOMIC

OOK V

DIST I UTION

CHAPTER I

DISTRIBUTION

1. We shall now study Distribution, the last of the four main divisions of our science. (Production of wealth, as we have seen, depends upon the co-operation of four factors—land, labour, capital and entrepreneur. The wealth produced is naturally shared by these four factors. In earlier stages of production the same man supplied his own land, worked with his own capital and organised, and undertook the risk of, production himself. The wealth produced naturally went to him alone. But with the progress of time the factors of production in an industry could not all be supplied by the same man. In fact in modern times they are most often supplied by different persons. Let us take the case of a joint-stock company. Land and buildings are hired, capital is borrowed, labourers are hired and the risk is undertaken by the shareholders. The wealth produced does not, therefore, belong to any one person or group, and so all, who have helped the production thereof by lending the services of their land, labour, capital and entrepreneurship, are entitled to a share of the same. Hence arises the question of distribution. In order to understand its

Distribution—
why does it
arise?

meaning and nature we shall have to study 'what it is that is distributed, ²who share in that distribution and ³how the share of each of them is determined.'

2. (Distribution, in economics, refers to the method on the basis of which the wealth produced in a given period is shared by all those persons who help in that production by lending the services of any of the factors of production. Of the total wealth produced in a given period one part goes to the Replacement Fund for replacing the circulating capital used up in the form of raw materials, fuel, etc., and also the fixed capital like buildings, machinery, furniture, etc., that are worn out, damaged or destroyed in the process of production. We may regard the total wealth produced as the gross product and that what remains, after providing for the Replacement Fund, as the net product, net product not from the point of view of the entrepreneur but from that of all the factors of production who have contributed their services. Thus we may define distribution as the sharing of the net product of an industry in a given period among the factors of production.

² It is, therefore, the method of remuneration received by them for their services to production. Land takes its share in the form of rent and labour in the form of wages; capital gets its in

the form of interest and entrepreneurship receives its share as profits. The same person may supply one or more of the factors of production and will, in that case, be entitled to one or more of these kinds of remuneration.)

(Looked at from another point of view Distribution is nothing but the valuation of the services of the factors of production, for the remuneration that they receive is really the price paid for their services.)

3. (The net product of every business enterprise is thus the fund out of which all the factors of production are rewarded, it is the source of their various incomes.

National
Dividend

In every country there is a large number of industries, firms, and many personal economic efforts and services for the production of wealth. The sum of the net products of all these business efforts throughout the country constitutes its National Income or National Dividend for the period, because this is the total wealth which is divided among the various persons in society who take part in production. The National Dividend is therefore the source of all incomes in society.)

It is sometimes spoken of as a fund or reservoir of wealth as if it is filled in one period and shared subsequently by the persons who contribute their services to its production.

But it should be very clearly understood that the National Dividend of any particular period is never stored up to be periodically shared among those who are entitled to a share. Goods are being made, sold and consumed day by day and the claimants to the shares of national dividend are receiving their shares daily, weekly, monthly and quarterly. Raw materials are being turned into half-finished and then finished goods and are then being carried to the proper places for consumption. While one part is consumed it is at once being replaced, for the flow of goods from the raw stage to the final stage of consumption is continuous. "Wealth is distributed...as it is produced. The product is a flow and not a fund." Thus the National Dividend is not like a fixed fund or reservoir which becomes exhausted as the contents are drawn out. It may be best described as an Income Stream from which incomes are flowing out to be refilled instantly by the flowing in of new incomes.

4. We have seen in section 2 that it is the net product of industry, which remains after the replacement fund has been provided for, that is distributed; that the claimants to the shares of distribution are the factors of production; and that their shares are designated as rent, interest, wages and profits. Now the question is How are these shares determined?

Distribution is, as we have known, concerned with the valuation of the services of the factors of production and their remuneration is nothing but the prices paid for their services. Like all prices, the prices of the services of land, labour, capital and entrepreneurship also are determined by the demand for them and their supply. From the demand side it is the utility yielded by a factor of production that will determine its remuneration. But then the rate of remuneration of any factor of production will depend upon its marginal utility, or productivity of any one unit of the factor. On no account can a producer who is business-like afford to pay for a unit of any factor of production more than what it produces. Now to look to the supply side. The supply price of a reproducible commodity, as we know, depends upon its cost of production and of an irreproducible commodity upon the subjective valuation of it made by the seller. The same forces determine the remuneration of any factor of production from the supply side. Land is a free gift of nature and as such there arises no question of a cost of production. The cost of labour may be roughly measured by the standard of living of the workmen. But all the same, it is not quite definite. The cost of producing capital measured by the

abstinences and waiting involved in all saving is purely subjective. Similar is the nature of the cost of entrepreneurship. But inspite of all the difficulties of measuring the cost of producing the services of labour, capital and entrepreneurship, there is a supply price which the owners of these factors of production regard as the minimum remuneration less than which they cannot accept. The exact rate of remuneration of any factor will be fixed at the point where the demand price determined by its marginal productivity and the supply price determined by the minimum acceptable to the owners of the factor will be at equilibrium. In as much as the latter, that is, the supply price, is of an indefinite nature it is not inaccurate to say that the normal remuneration of every factor of production under full and equal competition is determined by its marginal productivity. As Seager puts it, "Competition tends to secure for each factor in production a share of the money income corresponding to what it itself produces."

We shall now study one by one the various shares in the distribution and shall take up Rent first.

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Marshall—Economics of Industry, BK. VI. Chap. I.

Penson—The Economics of Everyday Life, BK. IV. Chap. XI.

CHAPTER II.

RENT

1. (The economic sense of the term Rent should be clearly distinguished from the different meanings attached to it in popular usage.

Different meanings of Rent

It is sometimes used to mean "a hiring charge" for anything, whether it be land, building, furniture, garment, musical instrument, or anything else, which the owner may hire out. Most commonly, again, it is used to mean a periodical payment made by a tenant for farms and houses. This payment should, however, be regarded as gross rent, for it is partly a payment for the use of the land alone and partly an interest on the capital invested in, or upon, the land.

But rent in economics really means the income that the owner of land or any other natural agent of production derives either by using it himself or by letting it out to a tenant on acceptance of a periodical payment for its use.

2. Land may be used like consumer's goods which yield a direct satisfaction; for example, pleasure grounds and residential sites. It may also be used as a producer's good, producing or helping to produce useful products, as agricultural

land and industrial and commercial land do. There may, therefore, be different kinds of rent from the various natural agents of production; for example, there may be rent of pleasure grounds, residential sites, business premises, forests, water power, fisheries, mines, etc. Although there are minor differences in the manner in which the different kinds of rent are determined yet the fundamental principle governing them all is the same. For our convenience of understanding the theory of rent we shall study the rent of agricultural land only.

3. Rent, it has been said, is the income from the ownership of land. This income results from its

productivity which, as we learnt
 What rent is paid for in the chapter on land (Book III),
 is determined by its fertility and

situational advantages.

(Ricardo (1773—1823), one of the most famous of the English Classical Economists, said that rent is paid for "the use of the original and indestructible powers of the soil", by which he meant the extent, solidity, chemical composition, situation and the climatic conditions as determined by air, heat, light and rain—all of which determine the productiveness of land. It has been contended that these "powers" are never indestructible, nor are they original in old countries where the soil has been under cultivation through the ages past. The soil can be removed and

its chemical properties are destroyed and also improved upon by human effort ; marshy land can be reclaimed and turned fertile ; the situational advantages change for the better or the worse with social changes like the increase or decrease of population, the growth or decay of towns and industrial centres, and also with the development of the means of communication ; even climatic conditions may be changed by afforestation or disforestation, opening up of the waterways and irrigational arrangements.)

(While admitting the substantial amount of truth in this criticism, one cannot, however, ignore the element of truth in Ricardo's statement. For example, the extent and certain intrinsic quality of the land are truly original and indestructible. Such is also the conformation of land : a gravelly hill-side, however much it may be turned useful, will never be comparable to a rich fertile plain. The climatic conditions too are mainly original and indestructible ; for example, the Indian climate will never be turned into British climate even by all the scientific methods that human brain can devise. The productivity of land, except in the absolutely virgin territory, is therefore due partly to the "original and indestructible powers" and partly to the permanent improvements which have become inseparable from the land

and even indistinguishable from its 'original' powers. Rent for all practical purposes should, therefore, be regarded as a payment for the productivity of land as determined by its fertility and situational advantages, no matter whether these are due to the 'original' powers of the soil or to the combination of the original powers and *permanent improvements* made by man.)

The different tracts of land, however, vary in productivity because of their differences of fertility and situational convenience. The worst plot which is just worth cultivating under any given conditions is the marginal land. It just repays the expenses of cultivation including the wages of the farmer for his work and management but yields no surplus; but a superior plot yields a surplus over the expenses of cultivation (See pp. 95-96), and this producer's surplus measures the productivity of the supermarginal land. It is the productivity of land that gives a rent to the owner when he cultivates it himself and that enables a tenant to pay a rent for the use of the land to its owner.

4. Productivity of land explains what gives a rent to the owner of land and enables him to demand

a rent from the tenant when he lets it out, but it does not explain the origin of rent. If the most desirable grade of land could be had more than

Why rent
originates.

enough and anybody could have it if he wished, there would arise no necessity of tilling the inferior grade. Only the best land would be utilized. The price of the crops realized would just cover the expenses of cultivation including a fair remuneration to the cultivator but it would leave no surplus as net profits. If there be any, people will be tempted to bring fresh plots of the same grade, which are supposed to be plenty, under cultivation; and the increased supply of crops and competition among farmers would lower the price down to the minimum required to repay the *full* expenses of the cultivator. Thus land which yields no surplus gives no income and so no rent to the owner, nor can he demand any rent either from anybody in as much as the best plots of land are plenty. As soon as the best land becomes scarce with the increasing population and growing need for crops the second grade will be brought under cultivation. It will now be the marginal land yielding no surplus; but the first grade will henceforth yield a surplus and this surplus, which is the income from it, is the rent. It is therefore the scarcity of a grade of land that leads to the rise of rent upon it.

No explanation of the origin of rent is, however, complete without a reference to the law of diminishing returns. If land would yield increasing, or even constant, returns, it would not be necessary

at all to bring the inferior land under cultivation, and all the crops could be raised from one good piece of land intensively cultivated for an ever-growing population. There would, therefore, be no scarcity of the best land and no rent either would arise at all. Thus the theory of rent is ultimately based upon the law of diminishing return, though, of course, rent arises immediately after the best grade becomes scarce.

5. We are now in a position to make a summary of what we have learnt so far and formulate the theory of rent.

(Rent is the income from land derived by the owner from its productivity. But all plots of land are not equally productive; nor Theory of Rent is the same plot equally productive under all farmers and in every season. In order to ascertain the true productivity of land we have therefore to assume that it is put to the use for which it is most suitable; that it is cultivated with sufficient labour and capital; that the farmer is of average skill; and the crops realized and their prices are what they should be in a normal year. It under such circumstances a plot of land yields a surplus over the full expenses of cultivation including a fair remuneration to the farmer for his work and management, that surplus measures the true productivity of the land and

is called the *Economic Rent* of land. (See Fig. 4 in the Appendix). The marginal land just repays the *full* expenses of cultivation but yields no surplus and so bears no economic rent. Economic rent therefore is the differential productivity enjoyed by the supermarginal land over the marginal land. If the owner cultivates the land himself the economic rent goes to him as his income. But he may also earn an income by letting it out to a tenant on acceptance of a periodical payment which may be called *Contract Rent*.)

(In fact rent ordinarily refers to this contract rent. If a man wishes to cultivate the superior land of another man, he will be at an advantage over those who cultivate the marginal land, and so the landowner will not part with his land unless he receives a rent for the same. But the question is How is this contract rent determined? This rent is nothing but the price paid for the use of the land, and like all prices it is determined by the demand for, and the supply, of the land. From the demand side, the tenant will make an estimate of the advantage or utility of the land, as measured by its economic rent and that is the minimum he would be willing to pay; and from the supply side, the landowner will make a similar estimate of the economic rent of his land and he will try to realize it from the tenant as contract

rent. If he fails to get as much he may accept less rather than keep his land unlet; but there is a minimum less than which he will not accept. Between the maximum of the tenant and the minimum of the landlord the contract rent will be fixed by the relative bargaining strength of the two parties.)

1. (If both the parties be equally "business-like" the contract rent will be fairly equal to the economic rent. If the landlord chooses to be gracious, like the English landlords, it may be less than the economic rent. If the tenant be ignorant, or finds no alternative means of livelihood, like the Irish tenants of the last century, he may pay a rent higher than the economic rent of the land.)

6. The modern theory of rent stated above has been developed from Ricardo's theory of rent now known as the Classical Theory of Rent. Though logically it ought to have come earlier in our discussion, it was deferred with a view to enabling the students to see just where his theory was faulty and in what respects it has been modified by recent economists.

(Ricardo in defining rent keeps the contract rent in view and says, "Rent is that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible

powers of the soil." According to him rent arises in the following manner.)

(He assumes first that different plots of land vary in productivity because of the differences of the productive "powers" of their soil; that the best land is limited in supply; and that the competition between the landlord and the tenant is equal. With these assumptions he proceeds to say that when a people first settles in a new territory the most "fertile" land is first taken under cultivation. As there is plenty of good land, available for any man who wishes to have it, every farmer will be in an equal position. With the growing demand for land, and owing to the action of the law of diminishing returns, more and more plots of the first grade of land will come under cultivation but the farmers will, for reasons stated in section 4, have no surplus over their full expenses of cultivation.)

(Suppose in this way with the growing demand for land all the plots of the first grade are taken up. If there is still more demand for land, the second grade of land is resorted to. It now becomes the marginal land just repaying the expenses of cultivation but yielding no surplus; the first grade becomes a super-marginal land and will yield a surplus that measures its productivity. Now a man cultivating the first grade will have an advantage over another tilling the second grade. If anybody

wishes to cultivate a land of the first grade belonging to some one else, he can do so only by making a periodical payment for the superior productivity of the land to its owner. This payment is the rent and it will be, under the equal competition of the parties assumed by Ricardo, equal to the differential productivity of the land over the second grade. In other words, rent will be equal to the full surplus left over the expenses of cultivation. He thus makes contract rent equal to the economic rent of land.)

(As population goes on increasing, ultimately the third grade will be brought under tillage. It will now stand at the margin of cultivation and the second grade will assume a super-marginal quality. It will now bear a rent equal to its differential productivity over the third grade and the rent of the first grade will rise higher still. The similar process will follow as more and more inferior land is brought into cultivation. Thus according to Ricardo, rent arises because of the scarcity of the best land ; the marginal land yields no surplus over expenses and so bears no rent ; the super-marginal land yields a surplus and a rent equal to the full differential advantages it enjoys over the marginal land.)

9.16.7. (It has been contended that Ricardo's theory is too abstract, untrue to life, and faulty in details. He is not accurate in saying that land is cultivated

Criticism of
Ricardo's
theory

in society in order of its quality.
Nor is it true to say that the
productivity of land is entirely due
to "the original and indestructible
powers of the soil", except in virgin lands, because
it is partly due to the improvements of a permanent
character made by man. Thirdly, again, he wrongly
assumes that competition between the landlord and
the tenant is always free and equal and so the contract
rent will cover the full economic rent of the land.)"

(In spite of these slight inaccuracies, however,
Ricardo's theory is essentially correct. For he
rightly says that rent is paid for the productivity
of land, that it is based upon the law of diminish-
ing returns and arises because of the scarcity of the
most desirable land, that the marginal land bears
no rent and that under free and equal competition
contract rent will be equal to the economic rent of
land. These are conclusions that have been
accepted by modern economists. The only
substantial improvements they have made upon his
theory of pure rent under simple conditions are that
in old countries the productivity of land should
be regarded as due to the "inseparable conditions
affecting its productiveness", whether they be
"original" or not; and that under some circumstances
the competition between the parties is not equal
and free and the actual rent may go above, or

fall below, the economic rent of land. In fact, except temporarily and under exceptional circumstances, rent ordinarily lags behind economic rent on account of custom, public opinion, class sentiment of landlords, long term leases and rising prices.)

According to the theory of rent, it is the super-marginal land only that pays a rent, but the marginal land that yields no surplus over the expenses bears no rent. But in an old country where every acre of cultivable land has been taken up, even the apparently worst plot yields a rent. The no-rent land, it might seem, does not, therefore, exist in an old country and the theory of rent does not appear to be realistic.

On a closer examination, however, it will be found that no-rent land does exist in, or for, every country. There is in every country, a good amount of waste land that is not fit for any work and bears no rent for any purpose. Moreover, the marginal or no-rent land of a country may be shifted to a foreign country the crops of which compete with its own in the home market. In that case the worst plot at home may be super-marginal when compared with some of the foreign tracts the crops of which are necessary for meeting the full demand of the home market, and as such it will bear a rent. In some cases again, the rent paid for the so-called

marginal land may not be *economic* rent at all but mere interest on any capital that the landowner has invested to make it *just worthy* of being cultivated. Thus among those plots of land which are used for any particular purpose there exist some that yield a real surplus and economic rent, there are others at the margin that yield no surplus and so no *economic* rent. The marginal land may, however, bear a kind of rent, which is not pure economic rent as we shall see in the following section..

. Land can be put to many uses. There is in every country a certain amount of land that is fit for no purpose and so bears no rent whatsoever. The next better grade is the pasture land. In this grade some plots—we are assuming all along that each plot is equal in area—are at the margin, just repaying the expenses but yielding no surplus. They have no alternative uses either. In this grade the marginal land will be really no rent-land; but the super-marginal pastures will bear an economic rent measured by their respective differential productivity over the marginal ones.

The other land above this marginal grade may be put to several alternative uses. Let us take wheat land and assume that all the good plots have been taken up and owing to the increasing demand for wheat the worst plot

Scarcity Rent
and Monopoly
Rent

usable for that purpose is now necessary if the full demand for wheat is to be met. But this worst among wheat land, which will bear no economic rent, may be a good pasture land and may yield a rent as a pasture. The wheat grower can in that case induce the owner to spare the land for him only on condition that he pays a rent at least as high as that it yields as a pasture. Thus the marginal wheat land will now bear a rent but it is not for any differential advantage that it enjoys over other land in its grade. It may be called *scarcity rent* as distinguished from the *differential rent*. Whereas all plots, including the marginal, must pay a scarcity rent which is equal for them all, it is the super-marginal plots only which will pay a differential rent.

We may take one concrete example. Let us assume, as indicated in the table below, that there

Grades of land	1st Dose	2nd Dose	3rd Dose	4th Dose	Scarcity Rent	Differential Rent	Total Rent
A	20	15	10	8	Rs. 2	Rs. 37/8	Rs. 39/8
B	15	10	8		„ 2	Rs. 17/8	Rs. 19/8
C	10	8			„ 2	Rs. 5	Rs. 7
D	8				„ 2	x	Rs. 2

are three good grades of wheat land, A, B and C,

mentioned in order of their quality. While the price stands at Re. 1 per maund three doses of labour and capital worth Rs. 10 each are applied to A, 2 to B and 1 only to C. A will realize 45 maunds for an outlay of Rs. 30, B 25 maunds for Rs. 20 and C 10 maunds for Rs. 10. The surpluses of A and B are Rs. 15 and Rs. 5 respectively, and these will be their differential rent; of course, C is a no-rent land for it yields no surplus.

Now suppose the demand for wheat increases and D grade is required for raising the needed supply, but D is the worst as a wheat-yielding land, though it is a good pasture yielding a rent of Rs. 2 per annum. If D is to be brought under cultivation it can be done only if the tenant pays to the owner a *scarcity rent* of Rs. 2 at least. But to a dose of labour and capital worth Rs. 10, D yields a return of 8 maunds only which does not repay the expenses of cultivation even, not to speak of yielding any surplus for paying the scarcity rent. The expenses and the scarcity rent together must be covered by the price of wheat, if the land is to be used at all. Naturally the price must rise to Re. 1. 8as. per maund, so that the 8 maunds of wheat may fetch Rs. 12 (Rs. 10 as the cost of production + Rs. 2 as the scarcity rent). The super-marginal land, A, B and C, will now be more intensively cultivated until their marginal doses

also yield 8 maunds. Their total yields will rise to 53, 33 and 18 respectively worth Rs. 79. 8as., Rs. 49. 8as., and Rs. 27 at the rate of Re. 1. 8as. per maund. Their surpluses will rise accordingly to Rs. 39. 8as., Rs. 19. 8as., and Rs. 7. of these Rs. 2 is the scarcity rent in each case and the rest are differential rents. Thus "More commonly the marginal land for any particular use itself affords a rent because, though marginal for the given use, it is above the margin for some other use to which it might be applied. Rent is thus usually of a differential and of a marginal element."*

Similarly when land of a particular class is under monopoly, all the plots including the marginal ones, will pay a *monopoly rent*, and the super-marginal plots will, in addition to it, pay a differential rent as well.

10. In India rent was originally fixed by custom. Owing to the decay of cottage industries in the 19th century many artisans lost their trade and fell back upon agriculture. The growing dependence of the artisans on land and the natural increase of population led to a severe competition for land. The people, who lost their economic equilibrium and found no alternative means of livelihood, were being forced by landlords to pay a rent often higher

* Seager—Principles of Economics, Chap. XIV.

than the economic rent of the land. Government of India, therefore, had to protect the interests of the tenants by legislation whereby the powers of the landlords to increase the rent were restricted. Thus rent in India has been influenced by three factors—custom, competition and legislation. Originally based upon custom rent was, under the influence of competition and absence of alternative occupations, rising above the economic rent but has been forced to keep below by legislation.

Some Indian economists are of opinion that contract rent in India is higher than the economic rent. There are two classes of 'ryots', those paying rent to the private landlords in the Zamindari areas and those holding land directly under the state in the ryotwari provinces. There has grown up a long chain of sub-tenants under the zamindars and the cultivators are paying a rent which robs them of their due remuneration for their labour on land. The state again, being in the position of monopolist in the ryotwari provinces, takes more than the tenant can pay without being deprived of his due.

The official view, however, is that rent in India does not exceed the economic rent of land. The government has imposed definite legal restraints on the power of increasing rent. Neither the landlord nor the state officials can increase it without sufficient economic reasons. The settlement officers are

directed not to assess more than 50 p. c. of the net assets of the land; that is to say, of the surplus that remains with the cultivator after meeting the *ordinary* expenses of cultivation. The net assets therefore are shared half to half between the government and the tenant.

The truth is that owing to the absence of alternative occupations and severe pressure on land, as well as the increase of middle men, the rent paid by the actual farmers in the zamindari areas are exceptionally heavy; and in the ryotwari areas the Settlement Officer's estimate of the 50 p. c. of the net assets is liable to be arbitrary, faulty and unfavourable to the tenant. In fact, even up to the end of the last century, the officers took the "prospective assets" instead of the "actual assets" of the land as the basis of their assessment.* The view therefore that the level of rent in India is higher than it should be does not seem to be entirely unfounded and the matter yet awaits an expert inquiry.

II. From our study of the economic rent of land it is not difficult to understand the relation between the rent of land and the price of agricultural produce. It is generally expressed by the statement "Rent does not enter into price." Rent here refers to the economic or differential rent only

* Vakil—Financial Development in India, Part III. xii.

and the statement does not convey the idea that rent is not paid out of the price realized, but it means that rent is not a necessary element of the cost of production and so it does not determine the price.

The statement, however, seems at first paradoxical, because the tenant regards rent as good a part of his expenses of production as the wages and interest charges, and so he takes it quite naturally as an element of his cost. But from the social point of view rent does not enter into price, as the following arguments will show.

Rent is paid by the super-marginal land only, but the marginal land bears no rent. The price of crops, is normally equal to the cost of production on the marginal land and so rent is not an element of price. Moreover, wages have to be paid by society to maintain the supply of labour, interest has to be paid to maintain the supply of capital, but rent need not be paid, for the supply of land in society, because land is a free gift of nature to the community. Further, the price of crops is fixed by the conditions of supply and demand in the market and if rent be remitted neither the demand and the supply of crops nor the price will be affected, but the tenants will realize the price determined as usual and

what they would pay out of it as rent to the landlord will only be retained by themselves.

So Ricardo says, 'Corn is not high because a rent is paid, but a rent is paid because corn is high'. In other words, rent is the effect and
 c. not the cause of price.

This doctrine is mainly true but it has its limitations. Although directly rent exercises no influence on price it may do so indirectly. Land is not always the same as society got it from Nature. Its productivity is not always due to the "original and indestructible powers" but is partly due to the treatment necessary for maintaining and improving its fertility. To the extent that rent is a payment for such treatment it is a part of the cost of production and so enters into^a
price. Moreover, as we have seen in section 9, marginal land may bear a rent in some exceptional cases. Unless the price be high enough to cover this rent the requisite supply of crops^b
will not be forth-coming. But then this rent paid by the marginal land is not pure economic rent, but either scarcity or monopoly rent, which is not referred to when the statement is made that 'rent does not enter into price'.

12. The rent of building sites called *ground rent* is also determined in the same way as agricultural rent, but it is determined mainly

Ground Rent by the situational advantages, although the quality of the soil does count, because a building may be raised easily on some plot but less easily on others which are soft or sandy or requires to be levelled upwards or downwards. Ground rent is generally composed partly of differential rent paid only by the super-marginal plots and partly of scarcity rent paid by the super-marginal and the marginal plots alike. The scarcity element acquires great importance in towns and highly congested areas.

13. As population increases, industries multiply and communication improves, both the value, and the rent of, land soar upwards, more so in the urban areas than in the rural. The

Unearned Increment of land

landlords take no pains to improve the quality or productivity of their land in any respect, but thanks to social progress and the rise of the rent and value, of their land, their income increases. This increase of income cannot be regarded as properly 'earned' by the owners. So it is called Unearned Increment of land in economics, and one of the important social problems of the day is how to appropriate a part at least of this unearned increment for society to which in fact it is mainly due. Already several western

countries have adopted: me' res. to appropriate a certain percentage of the unearned increment of land by taxation. In the permanently settled tracts in India the zaminders have been paying the same revenue to the state since 1793 but they have continuously increased rent on their tenants, and are thus enjoying a large unearned increment, part of which should in fact be appropriated by the state.

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CHAPTER III

INTEREST

1. Interest is the remuneration that goes to capital for its services in production. The interest that is generally paid is really Gross Interest which may be composed of the following elements. *

There is, first of all, (i) *Net or Pure Interest*, which is a payment for the mere use of the loan of capital. But in lending his money, whether with or without any security of property, a lender always runs a certain risk. The borrower may prove dishonest or incapable of repaying his debts ; he may invest the money in a business more or less risky. There are therefore both personal and business risks involved in every loan transaction. The owners of capital therefore feel shy to lend unless (ii) there is an extra payment, apart from the pure interest paid for the mere use of the loan, in order to cover the risks of loss.

Again some investments are convenient, others are not. Investment in a bank by way of deposits, for example, is very easy and convenient, because the lender can keep the deposit as long as he likes

or withdraw it at pleasure and reinvest it in more profitable ways elsewhere. But if the capital be lent to an ordinary individual, the owner may not have the loan returned whenever he wants his money for personal use or for better investments. Even when the money is returned it may keep idle with the owner for sometime and he loses his interest receipts for that period. Whenever therefore such inconveniences exist, the owner can be induced to lend his capital only on payment of (iii) a fee for the "inconveniences of the investment".

(iv) Lastly, the lender may have to keep an office, employ clerks and keep regular accounts. He has to make inquiry about the solvency of the borrower and in some cases even to run to the houses of the borrowers for the return of the loans. The borrower therefore must pay something more for the "work and worry" entailed upon the lender in "watching the loans, calling them in and reinvesting" them again. It is thus evident that interest generally spoken of refers to *gross* interest and it varies from borrower to borrower and from business to business. The interest received from the government stocks of the highest reputation and from banks reputed for impregnable solvency is the nearest approximation to net interest.

In India, the banks in the cities and towns charge a rate of interest many times lower than that.

charged by the village money-lenders. The reasons are not far to seek. The village money-lenders lend their money generally to poor peasants who can scarcely give sufficient security, and as agriculture itself is an uncertain business, the lender runs great personal and business risks. The inconveniences of his business also are no less great. He cannot recall his money at pleasure but has to wait till the crops are harvested, and even then he cannot be sure of full re-payment of his loan at once. Thus he fails to use his money whenever he wants it for meeting any personal difficulty or for investing it in a more profitable way. Thirdly, again, the money-lender has to undergo a good deal of work and worry for his loans. He or his agent has to keep regular information about the solvency of the borrowers and to run often to the house of the latter for recalling the loans. The town banks, on the contrary, transact business with rich merchants and manufacturers on good security and minimise thereby the personal and business risks. They also lend for short terms after which the borrowers have to return the loans, nor have they to run to the houses of borrowers. Their work and worry therefore are far less than those of the village money-lenders. Further, in the towns there are many banks, loan firms and private individuals transacting loan business with the merchants, and the supply of capital is comparatively large. But

in the rural areas, the money-lender has but few rivals. The virtual monopoly enjoyed by him and the lack of a large supply of capital in the village enable the money-lender to charge a very high rate of interest. All these causes explain the enormous difference between the rates of interest charged by rural money-lenders and city banks in India.

2. But then the question is 'What is interest a payment for?' Why is it paid at all? Various explanations have been given as to the origin of interest. It has been argued that interest is the payment for the *productivity* of capital, because with it producers can produce much more than they can without it. Some would say that interest is the reward for the *abstinences* practised by the owners of capital. Others are of opinion that interest is paid for the privilege of enjoying the *use* of another's capital. Bohm Bowerk, the Austrian economist, says that interest arises because of the universal tendency in man to discount the future and to regard the present value as greater than the future value. This is known as the *Time Theory of Interest*.

On a closer examination of these theories it will be found that none of them taken singly can be accepted as a complete explanation of the origin of

interest. All loans, we know, are not always productive even when used for that purpose; but they bear interest all the same. No borrower again will pay any interest for the use of another's capital simply because the lender practised abstinence in saving it and discounts the future, unless the borrower himself derive some advantage from the loan. Indeed for a satisfactory explanation of the origin of interest we have to combine all the theories put forward. The productivity theory explains the borrowers' point of view, or the demand side; and the abstinence theory, the use theory and the time theory together explain the lender's point of view, or the supply side. The three theories advanced from the supply side may however be compressed into a simpler and scientifically more accurate form. viz., interest is the "price of waiting". While the owner of capital saves it by abstinence and lends it to be used by a borrower on condition that it should be returned at a future date, he only waits for the consumption or use of his own capital. The interest is nothing but a reward paid to the lender for the waiting involved in saving and lending. We may therefore conclude that *interest is, on the one hand, a payment for the productivity of capital, and on the other, for the waiting of the lender.*

3.. Before we study the way in which the

actual rate of interest is fixed we should know the nature of the demand and for, and the supply of, capital. The demand for and the supply of capital in a society is a composite factor. It is composed of the demands of all persons who need capital for production of all kinds ; of Government for meeting so e unforeseen expenses like the cost of war or the expenses of so e productive enterprises like the development of railways, irrigation, etc.; of local bodies like the Municipalities and District Boards, who require funds for some works of public utility ; and also of all individuals who might be short of funds for the present and require money for providing their necessities or for meeting some te porary financial difficulty. Thus capital is de anded in a country both for productive and non-productive purposes. But in every case the demand will depend on two factors—the utility or advantage to be gained from the loan and the interest to be paid for it. With the increasing supply of capital the productivity of the successive units of it will go on diminishing, for each additional unit will satisfy less urgent wants than the previous unit. orrowers therefore will increase their demand only when the interest is 'lowered. On the other hand, if the interest rises, borrowers borrow capital that is only gently required.. Thus

demand for capital increases with a fall of interest and decreases with a rise of interest.

The supply of capital depends on the amount of savings in the country and is the result of the collective savings of all those persons who save anything from their current income. We have learnt in Book III the various motives and tendencies that induce men to save, and the desire to earn an income by way of interest is only one of these motives. There will therefore be some accumulations of capital even at a zero or negative rate of interest. But there cannot be said to be any supply of capital until it is lent to those who desire to borrow. The owners of capital require some inducements to lend and the payment of interest is a most powerful incentive. In the absence of it the supply of capital will fall far short of the demand. Thus whereas the supply of capital depends on savings, its amount however depends on the rate of interest and also on the security of the loans. From this we can deduce the law that other things being equal, the supply of capital increases with the rise of interest and decreases with the fall of interest.

4. We are now in a position to understand how the rate of interest is determined. Interest is nothing but the price paid for the use of capital. As all prices are determined by the interaction

of demand and supply, interest also is determined by the demand for, and the supply of capital. From the demand side, the rate of interest will be regulated by the marginal utility or productivity of capital, i.e. what utility or productivity will be lost if one unit of capital, say Rs. 100, be withdrawn from the total supply. From the supply side, the lenders will consider the cost of saving, i.e. the abstinences and waiting involved in saving and lending capital. It is, of course, purely subjective; but all the same, there is a supply price which must compensate waiting, not the waiting of all owners of capital but of the marginal lenders who are least willing to lend but whose supply is necessary to meet the demand for capital. In other words, *pure* interest is 'the amount actually necessary to recompense marginal waiting.'* Thus the demand price for capital is determined by its marginal productivity and the supply price by 'marginal waiting'. The rate of interest is fixed where the two meet, i.e. where the demand for, and the supply of, capital are in equilibrium. The following illustration will make the point clear :—

INTEREST

Rate of Interest	Supply of Capital per year—in lakhs of Rupees	Demand for Capital per year—in lakhs of Rupees
0	15	100
1	20	70
2	40	60
3	50	50
4	55	45
5	60	40

In the above example we find that while the rate of interest stands at 3 per cent per annum the amount demanded is 50 lakhs and that is also the amount of supply forthcoming. The rate of interest therefore will, under the conditions assumed, be fixed at 3 per cent. This is the net interest, to be paid for the mere use of the loan. The *actual* or *gross* interest will, of course, vary according to the risks, the inconveniences and the work and worry involved in different kinds of loan transactions.

5. It follows from the foregoing discussion that there may be several rates of interest in the

ifferences in
the actual rates
of interest in
the same locality
and different
localities

same locality; even the same person or bank charges different rates of interest. The causes of this difference in the same locality have been sufficiently indicated in section 1. But the causes of the different rates of interest in different localities of the same country and in different countries require some further discussion. The main factor in this case is the immobility of capital from place to place. The risks of loss, the inconveniences of watching the investment and recalling the loans, and worry, all are greatly increased when capital is invested in a foreign district or province; and they multiply all the more in the case of investments in a foreign country. The ignorance of the customs and habits of foreign borrowers and of their laws add to the shyness of capital all the more. In modern times the development of communication, wide travelling, spread of education and information have removed the immobility of capital considerably, but all the same it does persist, and is never absent anywhere. The result of this immobility is that the supply of capital is large at some places and small at others in proportion to the demand for it, and so the rate of interest keeps low in the former and high in the latter. If capital were perfectly mobile then for the loans

of the same character we would have a uniform rate of interest everywhere.

6. We have learnt in section 3 that the desire to earn an income by way of interest is a powerful incentive for saving and that people

Can there be a zero rate of interest? will save even when the interest rate drops down to zero or to a negative point. But it is interesting

to consider if it is possible for the supply of capital to outstrip the demand for it and for the interest rate to fall down to zero. Indeed such a situation is not theoretically impossible. We may conceive of a situation where even a negative interest is possible as when people who save capital may be prepared to pay a fee for its safe custody to any person or firm who undertakes to render such a service.

But really we cannot as yet conceive of a time when such a happy day will come. As capital goes on accumulating, standard of life, industrial changes, new inventions, new modes of consumption also go on creating more and more demand for capital. A calamity, like war, famine, earthquake, storms and other natural visitations, might sweep away the savings of years or generations, and a shortage of the supply of capital will be keenly felt. In fact the problems of human life all the world over are so many and varied that we cannot really

foresee any time when capital will go abagging for nothing. Taussig is right when he remarks that it is after all a race between accumulation and investment. When immense capital has been accumulated and the world's supply of capital is more than can be invested, zero rate may be a fact of the day.

But it is doubtful if human society will ever be able to save more than can be invested.

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CHAPTER IV

WAGES

1. (Wages are the remuneration of labour for its service in production. In considering wages we must distinguish between nominal and real wages, for the important thing from the point of view of workmen is the level, not of money or nominal wages, but of real wages. Nominal wage refers to the money wage but real wage consists of what money wage will buy in the form of goods and services and also the conveniences and inconveniences attached to an occupation.)

In estimating the real wages of a workman, we must, first of all, take into account his cost of living which, of course, depends upon the price-level of the commodities and services that enter into his consumption. Nominal wage may remain the same but yet the real wage may rise or fall with the fall or rise of the level of prices; again, nominal wage may rise or fall but if there be a proportionate fall or rise of the price-level, the real wage will remain the same. It is however not simply the money wage that the worker looks to in choosing his occupation. He has to take into account the

length of the period, and the cost of training, as well as the incidental expenses, of his profession. A lawyer, for example, must undergo a period of length training and has also to maintain an office with clerks, typists, etc.

The workman also adds to, or deducts from, his money income many conveniences or inconveniences that might go with his occupation. For example, he has to take into account the free quarters, low house-rent, free or cheap fuel and light, free food as well as occasional gifts of clothing and other necessities that he might receive from his employer. He may also be prepared to accept low money wages if there are opportunities for any subsidiary income for himself or his wife and children; nor will he forget the opportunities for physical, intellectual and social recreation. Moreover, he will consider the social prestige, the agreeability or disagreeability and the regularity or irregularity of his occupation. These explain why people generally like those occupations which are agreeable and regular and regarded by society as respectable. As a result of this tendency in workers the supply of labour in such occupations becomes large and the money wages also fall low; again, owing to the dislike for occupations which are disagreeable and irregular or seasonal and also for those which society regards as mean, the money

wages in them have to be high in order to attract the requisite supply of labour.

Lastly, the workers take into account the longer or the shorter duration of labour-power, and the risk of life and limb, in the occupations which they are to choose. Naturally, the money wages are high in the occupations which are dangerous and wear out energies rather quickly.

2. Before we study the way in which the wage rate is determined we shall do well to understand the peculiarities of labour as

Labour and
other factors
contrasted

a factor of production. Of the four factors, labour is perhaps in the weakest position. The landowner may supply the use of his land if the rent offered is satisfactory; otherwise, he may withhold the supply and use his land himself. The owner of capital may lend it if he receives a satisfactory interest, and he may refuse to do so if he is not satisfied with the rate of interest offered. The entrepreneur also is in a comparatively strong position. He has generally large reserve funds to depend on in times of bad trade or of accidental losses. He may employ labour if he choose or he may refuse to do so. Moreover, the owners of land and capital n no risk of life and limb involved in the occupation where their land and capital are used, and the entrepreneur also c generally avoid them.

The following *peculiarities of labour* have however placed it in a comparatively weak position. Labour is a perishable commodity. If the labourer refuses to work any day, his income for the day is for ever lost. But having no reserve fund, he can ill-afford to lose his income even for a day. He cannot therefore always refuse to accept low wages because unemployment might mean starvation for himself and his family. Thus labourers are often forced to accept very low wages even against their will. Labour, again, is to be delivered in person to the employer and so labourers have to take all risk of life and limb during their employment. The result is that even when high wages are offered in any occupation a labourer may refuse to work there because of the risk involved. Further, labourers are often uneducated which stands in the way of their accurately estimating the value of their labour and the necessity of a strong organization among themselves in order to strike satisfactory bargains with the employers. Their ignorance is also responsible for their lack of mobility from place to place and from occupation to occupation (see section 9) owing to which even when wages are low at one place or occupation they refuse to move elsewhere. Lastly, we may add that the supply of labour expands or contracts rather slowly. If the supply of labour in an

occupation is very small and the wages are high, the situation may continue for many years, for it takes time for the community to increase the number and skill of workmen; Or again, if the supply of labour is very large and wages are low in an occupation, the existing labourers cannot at once give up their jobs, and go elsewhere because of their dislike for emigration and their lack of training, or the means for it, for other occupations.

These peculiarities have therefore a *two-fold effect* upon workmen—(1) they cannot bargain with the employers on equal footing and are forced to accept low wages, and (2) there can be no satisfactory adjustment of the supply of labour to the demand for it.

3. In order to ascertain how the wage rate is determined it is necessary first to have a clear idea about the demand for labour and the supply of it and the forces that work on both sides.

Demand for
Labour

Just as there is no demand apart from price, so there is no demand for labour apart from the wages to be paid for it. From the demand side it is for the employer to consider what wages he can afford to pay and he will consider it on the basis of the advantage that he will derive from labour. In the case of an industrial labourer, the advantage from his service will, of

course, be measured by his productivity, i. e., by what he adds to the net productivity of the group of labourers to which he belongs. Thus if there be 100 men of equal efficiency in any group, the wage rate of that group will be determined by what one of them adds to the total productivity of the other 99. In other words, wage rate of a group of labourers is determined from the demand side by its marginal productivity. It should however be noted that the productivity of a workman will be different under different employers, for much depends upon the help and guidance and sufficient equipment of the labourer with tools and other capital. Thus the marginal productivity of a group of labourers is to be determined not by its productivity under the worst or the best employer but under the *average* employer who has average skill, and means enough to equip the labourers with sufficient tools and instruments.

4. The supply of labour also depends upon the wages paid for it. We have seen how the supply of an ordinary reproducible commodity depends upon its cost of production. Similarly the labourer in supplying his labour will consider whether the wages offered him are sufficient or not for enabling him to meet his cost of living.

which may be better expressed as the 'standard of life' of the group to which he belongs. The standard of life may be defined as "*The amount of necessities, comforts and luxuries which any person or class is accustomed to enjoy and to insist upon having*".* Or, as Seager puts it, "By the standard of living is meant the mode of activity and scale of comfort which a person has come to regard as indispensable to his happiness and to secure and retain which he is willing to make any reasonable sacrifice, such as working longer or postponing marriage". It is true that the expenses of living of all the individuals in a class are not the same, for different individuals have different modes and needs of life.

But all the same, it is true that every class of persons, in spite of the differences of individual inclinations and tastes within it has a "class personality" and a typical mode of life which becomes the standard of all of that group.

The standard of life of a class of workmen bears a close relation to its wages. If the wages rise above it the supply of workmen in the particular occupation may increase, either immediately by the rush of workers from other occupations, or ultimately by a natural increase of the number of workmen through more marriages.

* Ely and Wicker—Elementary Principles, Chap. xxx.

in that group encouraged by the rise of income. In either case the supply of labour will increase and so wages will fall down to a level equal to the cost of maintaining their standard of life. Or, it may be that the workmen with their increased income may themselves raise their standard of life from the original level and develop a higher standard maintainable with the increased income. If again the wages fall below the standard of life, the workmen will gradually leave the occupation and the fall of labour supply will be followed by a rise of wages till they are equal to the standard of life of the existing labourers; or the workmen, unable to leave the occupation, may be forced to adapt themselves to a new and lower standard of life. In either case the wages adjust themselves to the standard of life. Thus we find that there is always a tendency for the wages to be determined from the supply side by the workers' standard of life.

5. Wages are, as we have seen, but the prices paid for the services of labour, and like all prices they are determined by demand and supply. From the demand side the wage rate of a group of workmen will be fixed by the original productivity of that group under an average employer. For example, if there be in a

group a hundred men of equal capacity the wage of any one of them will be fixed by what he adds to the total productivity of the other ninety-nine. It goes without saying that the larger the supply of workmen the less will be their marginal productivity, of course, other things remaining the same, because increased supply of products that will result from the employment of more labourers will lower the price of the goods produced by them. From the supply side the labourers will consider the cost of maintaining their supply which they will, of course, measure by their cost of living, or more accurately, by their standard of life.

If both the parties are thoroughly business like, the wages will be fixed at that point where marginal productivity of the group is equal to its standard of life. If the wages exceed the marginal productivity, employers will lose and decrease the demand for labour, as a result of which wages will come down to the level of marginal productivity; if they are less, employers will earn more profits, firms will expand and demand more labour. The increased demand will force the wages upwards till they are equal to the marginal productivity. To look to the other side. If the wages are above the workers' standard of life, more workmen from other occupations will come in, supply of labour will increase to be followed by a fall of the wages

to the level of their standard of life; if, however, the wages fall below the standard of life, supply of labour will decrease to be followed by a rise of wages. Thus the normal wage tends to approximate the point where the marginal productivity of the group of workers and their standard of life are at equilibrium.

As workers' standard of life is rather vague and indefinite, we may, for the sake of more definiteness, conclude that the wage rate of a group of labourers tends in the long run to be equal to its marginal productivity. But contracts for wages are made before marginal productivity can be definitely ascertained. It is therefore more accurate to say that they are equal to the employers' expectation of the marginal productivity of labour. Inasmuch, however, they are paid in advance of the sale of goods, it is still more scientifically accurate to say that wages tend to be equal to the "discounted employers' expectation of the marginal effects of labour upon the product".*

Finally, to make our theory true to life we may note that actual wages are often below the marginal productivity of labour, because of the failure of workmen to bargain with the employers on an equal footing. owing to their poverty, ignorance and want of organization and also because

* Chapman—Outlines of Political Economy, Chap. XXVII.

of their lack of mobility. In fact, in extreme cases, wages may even go down to the level of mere subsistence of the workmen. This disparity between the productivity of labour and its wages is, of course, gradually being removed in countries where labour is well organized by trade unions, and has acquired a political power to influence legislation in their favour.

Having now learnt the way in which the rate of wages in an occupation is fixed, we may proceed to study the causes of the different rates of wages, prevailing in different occupations in the same locality and in similar occupations in different localities and countries.

**Causes of the
Different Rates
of wages**

The differences in the rates of wages among the different occupations and grades may be accounted for by the facts that they differ with regard to the amount of physical strength and skill required of the workers. They also differ in agreeability and in the amount of risk of life and limb involved in them. In some occupations success is more certain than in others, and some occupations again offer regular employment while others are seasonal in character. Society also regards some works as respectable and others less so. It goes without saying that people naturally prefer those works which are agreeable,

regular, safe and respectable in public estimation. The large supply of labour attracted to these occupations leads, as a matter of course, to lower wages than in those which are less desired.

The wage rates for similar kinds of work again differ in different localities and countries for two main reasons. Firstly, there are the differences in the cost of living between different localities and countries, owing to which wage rate must be higher in places where the cost of living is high than in places where it is low. Another powerful factor is the immobility of labour from place to place or country to country due to a number of causes which have been dealt with in section 9 of this chapter. If workmen moved freely from places of low wages to places offering high wages, the *real*, not the nominal, wages for the same kind of work, would have been uniform everywhere.

7. The wages in certain disagreeable works and of women as a class present an interesting study. The general idea is that

Low wages in the more the disagreeability of
Disagreeable works a work the higher must be the
wages in it. But it is not
always true. In those occupations which are disagreeable but at the same time require great physical strength or skill, or involve great risk

of life and limb, as the occupation of railway engine-drivers, wages will certainly be high because the supply of labour in such works will be very small. But there are some disagreeable works which require no great strength, nor any skill or training, nor involve any great risk, for example, the works of the chimney sweeps, the lamp-lighters in a municipality, the scavengers, etc. Here the wage rates are low because there is in every society a large reserve of labourers having no means for any satisfactory education or training for higher works.

8. It is also a well-known fact that women are, as a class, paid lower wages than men even when they are doing the same work. The following causes account for this disparity of wages of the two sexes. The field of work, which is exclusively the women's own and where they have not to compete with men, as in nursing, sewing, needle work, embroidery and lace-making, etc., is very narrow. As most of the women run after these works, they become over-crowded and consequently the wage rate falls low. In other fields, where they have to compete with men, the women suffer from many handicaps. They have not in the past received as much scope for training as men and so they

are as a class not as efficient as their stronger rivals. The very fact of their motherhood also makes for inefficiency, because they cannot devote themselves exclusively and continuously to any work. Further there is a peculiar public opinion that goods produced by women must of necessity be inferior in quality to those produced by men. This idea has however now practically vanished from the industrially advanced countries. Moreover, women are not as well organized as men and the trade unions formed by men workers also have so long been averse to admitting women members. Lastly, in certain cases again women more skillful, or at least not less so, than men are receiving lower wages because majority of them, working for income as mere supplementary to the general income of their families, accept low wages. The minority therefore are forced to accept the same wages as their sisters in the majority. It should however be noted that these handicaps have been to a great extent removed in the most industrially advanced countries of the west and with the recognition of equality between the sexes the disparity between their wages is gradually vanishing.

∴ (The economic well-being of the labourers and the industrial progress of a country depend

to a considerable extent upon the mobility of labour. It may be from place to place and from occupation to occupation. The one is the Geographical or Territorial mobility, and the other Trade or Occupational mobility, of labour. Territorial mobility may be within the country or outside according as labourers move from one part of the country to another or from one country to another. Trade mobility again may be Horizontal when the movement is from one work to another of the same kind or grade, or Vertical when it is from one grade of work to a different grade.)

(This twofold mobility not only exerts a great influence upon the efficiency of workmen but also upon production and distribution of wealth in a country. If labourers move freely and quickly from places where wages are low—perhaps because of large supply—to places where they are high, they can earn higher incomes and lead a better life. Their efficiency and productivity will increase, as a result of which there will be a greater production of wealth. In India population is dense in some places but scanty in others, but mobility of labour is little. It is why while in some places industries thirst for labour, in others there are more labourers than

needed. This certainly hampers the industrial prosperity of the country.)

(Again, it is also necessary that labourers should get into one work as soon as they lose their own, and move freely and quickly from occupation where wages fall low to another where they are high. Otherwise the workmen fail to earn as much as they should, and if they remain unemployed for a considerable time not only do they lose their income during the period of unemployment but their skill also wears out, and from employed they become unemployable.)

(Unfortunately, however, labour mobility is not always free nor quick. Territorial mobility, for example, is hampered by a lack of the means of communication, ignorance and fear of unknown lands, differences of languages, customs and surroundings and love of the paternal home. The nature of the workmen's occupation also retards their mobility. For example, it is easy for a carpenter to move from one district to other with his tool-bags and belongings. Similar is the case with the factory hands, blacksmiths, weavers, etc. . But a peasant finds it difficult to leave his land and move to a distant place with his title, ploughs and other belongings. Certain social laws and customs in the country also stand in the way of the free

ovement of labourers. In India, the joint-family system; the laws of inheritance; religious scruples, and the system of outcasting from society, though it is now a vanishing factor, discourage the movement of workmen from one place to another, specially to a distant land. Lastly, we may add the Anti-migration Laws as passed by some British colonies against the coloured peoples and by the United States of America against the Asiatic peoples. In India, all these forces are operative more or less against the movement of labour to foreign districts, provinces or countries. It is why labouring population in India is not satisfactorily distributed. Whereas it is dense in some areas, it is scanty in others. The one leads to unduly low wages and the other hinders the development of industries. In recent years, however, improvement of the means of communication by railways, steamships and roads, spread of education and information have increased the territorial mobility of Indian labour, which has been further helped by the slackening of the old caste restrictions, rising cost of living and prospects of higher wages in the newly developed industrial centres.)

(Occupational mobility also is hampered by a number of factors. The workmen are often ignorant of the market demand for labour and of vacancies, and when they lose their jobs they only aimlessly

roam about in search of employments. Uneducated as they are, they lack foresight with regard to the future prospects of an occupation. The parents often foolishly allow the sons to adopt the same occupation as theirs even when it is not paying enough, or they train their sons for an occupation which becomes overcrowded when the training is completed ; but then there is neither means nor time for the children to acquire a new skill. It is also well-known that in modern times labour is specialized and a workman who has acquired a skill for a particular job finds it difficult to find another when he loses his own. In certain cases the masters of an industry impose artificial restrictions upon the entry of fresh men into the field. A vakil in India cannot practise outside the jurisdiction of the High Court which carols him ; but if a lawyer wishes to practise anywhere in the British Empire he must be a member of one of the Inns of Court of London. The cost and length of training as well prevent many workmen from qualifying themselves for occupations which offer better prospects. Lastly, social customs like the caste system in India do often chain down workmen to particular occupations. There are however certain forces that tend to increase the occupational mobility of labour. For

example, progress of education, both general and technical, grant of scholarships to meritorious boys and youngmen, spread of the democratic ideals of liberty and equality and slackening of all artificial and social restrictions, like the caste rules, are all doing a great deal for the occupational mobility of workmen.)

10. We have learnt in the previous section that there are many hindrances to occupational mobility of labour. In spite of certain forces working in its favour those hindrances do exist in a greater or less degree in all countries, and maintain more or less an ascertainable distinction among workmen. We may, for example, classify them; after Chapman, under the following five heads :—

(1) Unskilled manual, e.g., the scavengers, the chimney sweeps, the errand-boys, ordinary domestic servants, etc.

(2) Skilled Manual, e.g., carpenters, blacksmiths, weavers, shoe-makers, mechanics, etc.

(3) The Lower Middle Class, e.g., clerks, overseers, supervisors, etc.

(4) The Upper Middle Class, e.g., managers, engineers, doctors, lawyers of good standing and income, etc.

(5) The Wealthier Capitalist Class, e.g., the big landlords, merchants, manufacturers, bankers, traders etc.

The above classification, however, is not strictly logical, for the classes overlap one another. Lack of foresight, ignorance, the cost and length of training and many other forces generally prevent the competition of one class of labourers with a higher class, and the classes become fairly distinct and exclusive. It is why they are regarded as Non-competing Groups. But occupational mobility does exist inspite of so many hindrances: the carpenter may become a contractor, the skilled mechanic may become an independent businessman, a hired manger may set up an independent business of his own and become a capitalist producer, and so on. Thus the expression Non-competing Groups is not strictly accurate. But it may be justified in view of the fact that at any one time the competition among workmen is limited in their own group or between one group and the one next higher to it.

11. We have learnt in section 2 that labour as compared with the other factors of production is in a peculiarly weak position.

(Trade U 'ons The present section deals with the way in which labourers have tried to strengthen it by means of Trade Unions. These are permanent and voluntary associations formed by workmen for mutual assistance, protection and benefit. They may assume three fo s. For

example, there are Trade Unions which are associations of workmen of the same occupation, as those of railway engine-drivers, postal clerks, sea-men, etc. When the workers of all grades in the same industry are organized in an association, it is called an Industrial Union, as that of all the railway employees. Lastly, when the workmen of all occupations and industries form an association it is a Labour Union. In India a Trade Union Movement has already been set on foot with its headquarters at Bombay. But for scientific accuracy it should be called a Labour Union, for it is an association of workmen of diverse occupations and industries in India.

The Trade Union Movement is really an outcome of the Industrial Revolution. Before it there were craft-gilds, but they looked to the interests of both the masters and their apprentices. After the Industrial Revolution and growth of capitalism the relation between employers and workmen became distant, and a conflict of interests grew up between the two parties. Labour is, as we know, a perishable commodity and the workmen have but little reserve fund to depend on in times of unemployment, nor are they intelligent enough to know the worth of their labour. They are therefore often forced to sell it cheap. On the other hand, the employers are educated, shrewd

and sometimes well-combined. Under such circumstances contract between the employers and the workmen can never be free and equal. Individual workman can scarcely hope to strike a satisfactory bargain with the employer and the latter also taking advantage of his weakness may pay him less than his productivity. The idea of the unionists is that unless the workmen organize themselves they cannot present a solid body of opposition equal in strength and fighting power to that which the employers possess through their superior strength and position. It is therefore to protect the workmen against unfair bargains that trade unionism came into existence and its essential feature is the substitution of *collective bargaining* for individual bargaining.

The functions of a modern trade union fall under two heads which may be distinguished as the fraternal and the militant functions. A union acts for its members as a *benefit society*, assisting them in times of difficulty. For example, it provides for them allowances for accident and sickness, replaces their tools and instruments whenever they are lost through some accident, provides them with allowances in periods of unemployment and acts as a labour bureau to find them employment. It gives them a super-annuation allowance when they are too old to work and bears their funeral

expenses, if necessary. It also maintains libraries, and arranges debates and lectures for the education of the members. Moreover, the unions themselves assist one another in times of financial and other difficulties. The fraternal functions of the unions are all praiseworthy; but our chief interest lies in their industrial policy, and it is there that the militant activities of the unions arise. As a militant society, a union protects the interests of its members by entering into a collective bargain with the employers for a standard or minimum wage, shorter hours of work, healthy conditions of work and living as well as other welfare arrangements for them. It also defends them against any unfair and arbitrary treatment by employers. To secure these objects the unions generally adopt the peaceful methods for coming to a general agreement with the employers but if the peaceful means fail, they fall back upon threats, strikes, boycott, ca'canny policy,* artificial restriction of the supply of labour, and other means more or less violent.

12. The question has often been asked if trade unions can raise the wages by their own

* Ca'canny policy refers to the policy of unions encouraging workmen to restrict the amount of work to be done in a given period so that there may be left more work for the future.

Can Trade
Unions raise
wages?

efforts. We have seen under section 5 that the wages of a group of labourers are fixed by its marginal productivity. In that case there seems to be no justification for trade unions to force the general wages above what labour produces. For even if they succeed in doing so, it must be a mere temporary gain won over the employers. In the long run, the loss of profits will lead to the failure of business and dismissal of hands owing to which wages will be forced down again. They can however directly raise the wages of a particular group of workmen in an industry if the following conditions be fulfilled. Firstly, the employer should have no other alternative means of getting the work done. The demand for the commodity to be produced should also be inelastic, so that it may not fall if the price be raised to cover the increased wages. Again, the wages of that particular group of workmen should form only a very small portion of the total expenses of production so that even a considerable rise of their wages does not lead to any appreciable rise of the price. Lastly, the other groups of workmen should not be in a position to restrict their supply of labour. It goes without saying that such conditions are very rarely fulfilled. Thus we may safely conclude that trade unions can

scarcely raise wages, whether in general or in particular cases, by any *direct* means, unless, of course, the wages are already below the marginal productivity of labour.

That does not mean, however, that the unions cannot indirectly raise the wages by increasing the efficiency of labour. If, for example, they co-operate with the employers to make business smooth, and make the labourers educated and arouse their sense of duty, ambition and desire for a better standard of living, in short, if they develop their physical, mental and moral powers, their efficiency will naturally increase; and increased productivity will be, as a matter of course, followed by a rise of wages. Thus it is by such indirect means only that trade unions can permanently raise the general level of wages in a country.

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CHAPTER V

PROFITS

1. In this chapter we shall study how the entrepreneur, the last of the factors of production, is rewarded and how his share in the distribution is determined. The share that goes to him is called *profits*.

(The term profits, generally spoken of really means gross profits, containing within it elements that cannot scientifically be regarded as earned by the producer for his purely entrepreneurial functions.

Analysis of gross profits From the price realized he has to pay the rent, wages and interest on the land, labour and capital supplied by others, and what remains as residue is the gross profits.)

1. In order to find out his net profits we must, first of all, deduct the rent and interest on any land and capital that he has supplied himself, for if he would lend them to others he could earn rent and interest for the same. A further deduction must also be made as his "wages of management" for the ordinary managerial work that he does. This must be as high as he could earn elsewhere as a hired manager. All these three elements are excluded because they are due to him not for his

entrepreneurship but for the services of other factors of production supplied by himself.

2. From the balance some portion must again be subtracted and credited to the Replacement Fund for replacing the used up, worn out, damaged and obsolete capital (see p. 280). This must be regarded as the necessary expenses of production and as such should be provided for from the gross profits.

3. The entrepreneur sometimes makes certain gains that cannot be regarded as due to his personal ability. For example, if he enjoys a monopoly, he may make certain monopoly gains which would not accrue under competition. Again, some unforeseen events might come like a windfall and enable him to earn some accidental gains, the result of a sheer good luck. After the outbreak of the Great War in 1914 certain Chemists and Druggists Stores in India which had a large stock in reserve made enormous profits when imports from abroad were hampered and the prices rose high. A firm which regrets a large stock of unsold black cloth may come by quite unexpected gains when a great man dies and mourning suits and badges are in great demand. These accidental gains cannot be regarded as pure profits since they are not the result of any personal ability or foresight of the entrepreneur.

4. After deducting all the foregoing elements

that what remains as residue is the pure profits of the entrepreneur as a risk-taker and organizer. They may be composed of two elements one of which is the payment for risk-taking. Every business producing in anticipation of demand involves a certain amount of risk. The producer may suffer losses from bad trade, wrong anticipation, compensation to workmen for accidents, expensive lawsuits, etc. He has therefore to provide for an Insurance or Reserve fund to cover such losses. Another part of his pure profits is the payment for organizing ability which must be distinguished from his "Wages of Management" for mere managerial work. The risk-taking and organizing functions are essentially the entrepreneur's functions and what is earned for this twofold service is what may rightly be regarded as his pure or net profit.

The American School of Economists, namely Walker, Seligman, Ely, Wicker and others exclude the reward for risk-taking from net profits evidently because it goes to the Reserve Fund and forms a necessary part of the normal expenses of production and may not in any way be available to the entrepreneur for his personal use. If he earns anything beyond this it is for organizing ability and this reward alone should be regarded as the net profits. Marshall

and others of the English School regard the payment, for risk-taking also as an element of net profits.

It is obvious that gross profits of a business may not always include all the elements mentioned above. For example, if the entrepreneur supplies no land and capital of his own, the gross profits will not include rent and interest. A competitive business will make no monopoly gains nor do the chance gains occur always.

The following table will show clearly the various elements of gross profits :—

**Gross
Pro ts**

1. Reward for other factors
Supplied by the Producer, viz.
 - (a) Rent for Land,
 - (b) Interest for Capital,
 - (c) Wages of Management for labour.
2. Replacement F d.
3. Extra-Personal gains—
 - (a) Monopoly gains,
 - (b) Chance gains.
4. Pure or Net Profit—
 - (a) Reward for risk-taking
credited to the Insurance
or Reserve Fund.
 - (b) Reward for Organizing.

[As will be seen in the following section, the elements under 1, 2 and 4 (a) only will enter into normal price whereas those under 3 and 4 (b) will not.]

2. We shall now see how the net profits are determined. For the sake of simplicity we shall discuss here the net profits of a firm under competition, for monopoly profits will, of course, differ from competitive profits. We have seen in the chapter on Values and Prices that the normal price of a commodity produced under competition, is fairly equal to the cost of production of the marginal producer. In order to understand the way in which the net profits are determined we must have a clear conception of the position of this marginal producer. He is one who just manages to retain his position, in the long run, in the rank of the entrepreneurs. From the price, he realizes the rent, interest and wages for the land, capital and labour that he hires and also supplies himself. He must also realize enough for the replacement of his capital. Over and above these, he must earn something that will cover the incidental risks of his business. If he can realize these elements he does not suffer any positive loss, though he earns nothing for pure organizing services. The reward for

risk-taking which is an element of net profit must be earned by him if he is to assume the risk that goes with entrepreneurship, and naturally this must be covered by the normal price of his products. It thus follows that the marginal producer also earns a certain amount of net profit, but this amount is a payment for taking risk alone. Above him there are the super-marginal producers who are more efficient as organizers, who run their firms with greater economy and produce goods at lower costs than he. Naturally they will have a surplus left in their hands which must be credited purely to their superior organizing capacity. This surplus will be different for the different producers of the super-marginal rank, but the surplus left with every one of them will measure the superiority of skill that he possesses over the marginal producer. Thus we may conclude that net profit is composed of two factors—a reward for assuming risk and a reward for superior ability. The former, along with the wages of management, is the minimum remuneration that society must pay through price if the requisite amount of entrepreneurial service is to be forthcoming; and the latter is earned only by the super-marginal producers as remuneration for their superior ability.

3. The normal price of a commodity just covers the full expenses of production of the marginal producer, including his wages of management and a payment sufficient to remunerate him for the assumption of risk, but yields him no surplus for his organizing services. That surplus is earned by the super-marginal producers only. It follows therefore that the reward for risk-taking, which is one element of net profit and may properly be designated as *normal profit*, does enter into normal price as one of its component elements; but the reward for superior organizing, which is another element of net profit, does not enter into price as a determining factor, but is determined by price itself.

Walker and other economists of the American School exclude, as we know, the reward for risk-taking from net profits which are according to them a payment for organizing skill alone that is not received by the marginal producer. They naturally conclude that net profit does not enter into price. If their view of net profit be accepted, their conclusion about its relation to price must also be accepted as correct.

REFERENCE :

- Marshall—Economics of Industry, BK. VI. Chaps. VII-VIII.
 Ely and Wicker—Elementary Principles, Chap. XXXII.

CONCLUSION

nature and scope of economics

1. We have made a survey of the four main divisions of Economics and have formed a fairly good idea of its nature and scope. It is, as we have seen, concerned with the study of all those human activities in society which are related to wealth, that is to say, it studies the consumption, production, exchange and distribution of wealth in society. To have a clear conception of the nature and scope of the subject we should first study what kinds of men and what motives and conduct of men are studied in economics.

Economics is concerned with the study of men living in society, not of men living outside it; nor of any abstract, unreal or abnormal man but of real man, man as he ordinarily moves and acts in society. But, it confines itself to the study of the business part only of man's life, that is all those motives and conduct of man which are related to 'earning an income' or 'getting a living', and can, in modern society, be "measured by a money price". As such it excludes from its scope all activities which, though measurable by a money price, are undergone mainly out of affection and

love for others, or out of a sense of moral duty towards society. Economics then is a study of all those social phenomena that are due to the efforts of man for getting a living.

But is it of the nature of a Science or of an Art? * (Some would say that scientific laws are of a universal character, holding true at all times and places; for example, the physical laws, like the law of gravitation, and the chemical laws, etc., are true always and everywhere. The conduct and actions of the forces of nature are under the rule of 'inexorable necessity' and know

* A Science is a systematized body of general rules or laws regarding the causal relations between things in a particular department of knowledge. There are the Natural Sciences, like physics, chemistry, astronomy, etc., which study the forces of nature in a systematic form and register their conclusions about the relations between causes and effects in the form of general statements, called 'laws'. There are also the Social Sciences, like ethics, jurisprudence, politics and economics, each studying one aspect of the social life of and systematically arranging the knowledge gathered in the form of general rules. A Science, however, is a body of mere abstract principles and so theoretical; but an Art comprises rules and methods of doing particular actions and so has a practical end in view. A science is called *positive*, when it simply states facts as they *are*; and *normative*, when it states facts as they *should be*. Psychology, for example, is a positive science whereas Ethics is a normative science.

no variation. But human beings have a free will of their own. No two men act alike under any given conditions; nor even the same man acts always alike under similar circumstances. No universal law, therefore, can be laid down about human motives and conduct and so the so-called social sciences, of which economics is one, cannot be called sciences proper.

Such a view seems to be unnecessarily severe. Let us, however, first understand the true nature of the economic laws. They are not like state laws which are commands as to what the subjects must do or must not do; nor are they like the ethical or moral laws as to what men should do or should not do; nor are they of a universal character like the laws of natural sciences. We can observe, and experiment upon, the working of the natural forces in our laboratory and by eliminating some forces and introducing others we can watch their effects and arrive at exact laws about them.

Economic laws, however, are of a different nature. We cannot experiment upon human motives and conduct in any laboratory. All that we can do is to observe man's conduct which will, of course vary according to time, place and circumstances. The economic laws are, therefore, only general rules as to how a normal man will generally act in his business life under given conditions. It is

true that owing to the free will that governs man's actions, it is difficult to lay down any rule of a universal nature about human conduct. In fact, every country and every age has to formulate its own economic laws. But nevertheless rational beings as they are, men normally act in a reasonable manner and uniformity of reason implies uniformity in action. Thus, other things being equal, men will generally act alike under similar circumstances. Economic laws are, therefore, statements of tendencies in human actions and so of a *hypothetical* character, which has always to be emphasized by qualifying expressions, like 'probably', 'other things being equal', 'in general', etc.

But that does not mean that they are unscientific. In fact, the laws of all sciences are more or less hypothetical and as such mere statements of tendencies. The law of gravitation, for example, cannot make itself effective in the case of a balloon, nor can hydrogen and oxygen form water except under some given atmospheric conditions. Thus economic laws are certainly scientific, and economics is certainly a science, though it is not so exact like the natural sciences. As Marshall says, "The laws of economics are to be compared with the laws of the tides rather than with the simple and exact law of gravitation.")

As a science, again, economics has two

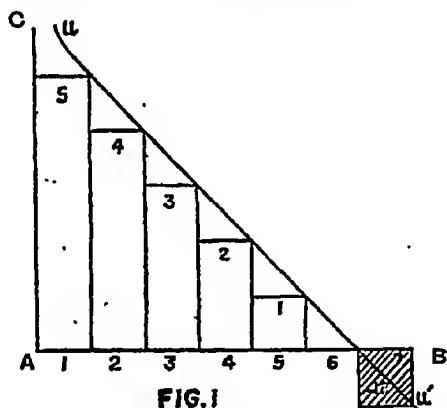
aspects—*positive* and *normative*, the former stating facts as they are, and the latter holding out “ideal of facts,” that is, facts as they should be. Economics is also *art*. For example, while positive economics says that an unearned increment accrues from land as a result of social progress, normative economics says that as it is due to the society it should be appropriated wholly or partially by the state, and the economic art would show us the means whereby such appropriation can be effected without injustice to anybody. Again, while positive economics states that the railway industry wields a great power for good or for ill, normative economics would say that it should be controlled by the state, but it is the economic art that indicates the lines on which such control can be effectively exercised. Instances like these can be multiplied to show that economics is both a positive and normative science and is also an art, or rather it comprises a number of arts.

REFERENCES :—

- Marshall—*Economics of Industry*, Bk. I, Chapters III-IV.
Chapman—*Outlines*, Chapter I.

APPENDIX

1. The Law of Diminishing Utility and the Law of Diminishing Returns are similar in character, the one making itself felt in consumption and the other in production. Their operations can be represented by diagrams almost similar. Figure I represents the Law of Diminishing Utility as explained by the example of mangoes in page 35. The units consumed have been shown on the base line AB and the narrow parallelograms represent



the amounts of utility derived from the successive units. The 6th unit affords zero, and the 7th unit a negative utility or disutility of *one* shown below the base line. UU' shows the gradual fall of satisfaction. The *total utility* derived from 5 man-

goes is 15 units, that is also the total utility of 6; and the total utility of 7 mangoes is $15 - 1 = 14$. The *marginal utility* of 7 mangoes is -1 , of 6 mangoes *zero* and of 5 mangoes *one* only.

Where the utility begins with a measurable amount the Utility Curve UU' should be made to touch the perpendicular line AC ; but where the first few units yield infinite or absolute utility the Utility Curve should not touch AC .

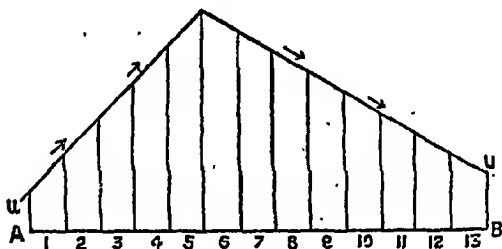


FIG. 2

ut there are also some cases, as given in pp. 36-37, where the satisfaction from the first few units may go on rising only to fall after reaching a certain point. These may be represented by Figure 2.

2. The ordinary case of Diminishing Returns as explained by the example given in p. 85 can be diagrammatically represented by Figure 3. The units of labour and capital applied are shown on

the base line AB, and the parallelograms represent

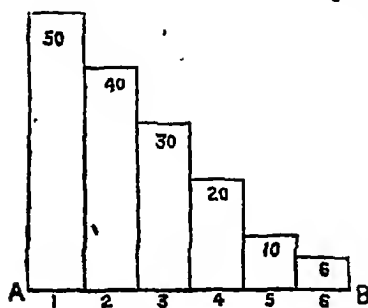


FIG. 1.

the yields from the successive units. The exceptional cases of diminishing returns where the first few doses yield increasing returns may be represented by a diagram similar to Figure 2.

3. Figure 4 shows that when the price of wheat stands at Re. 1 per maund the farmer applies 5 doses of labour and capital and realizes in all 150 maunds of wheat at the cost of Rs. 50. The total expenses of production are covered by 50 maunds and so the farmer enjoys a surplus of 100 maunds worth Rs. 100. The shaded

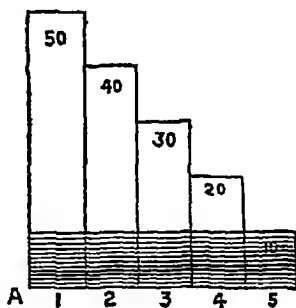


FIG. 4

area represents the cost of production and the rest represents the *Producer's Surplus*. If this surplus be taken to be realized by an average farmer in a normal year it represents the real productivity of

the land and is, therefore, the *Economic Rent* of the land.

4. Figure 4 may also serve us as a diagram representing *Consumer's Surplus*. If, for example, a man buys 5 mangoes for one pice each and each unit of satisfaction is measured by one pice, he derives, suppose, 50, 40, 30, 20 and 10 units of satisfaction from the individual units taken separately. The total satisfaction is 150 worth 150 pice and the satisfaction lost in paying the price of the mangoes is 5 pice only. The man, therefore, enjoys a *consumer's surplus* of 145 pice or Rs. 2. 4 as. 3p. The loss of satisfaction is indicated by the shaded area and the consumer's surplus by the rest of the Figure.

5. For the diagrammatic representation of the Demand Curve and the Supply Curve and of the Equilibrium of Demand and Supply students may refer to Marshall's *Economics of Industry*— Book III. Chap. III. and Book V. Chap. III.

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